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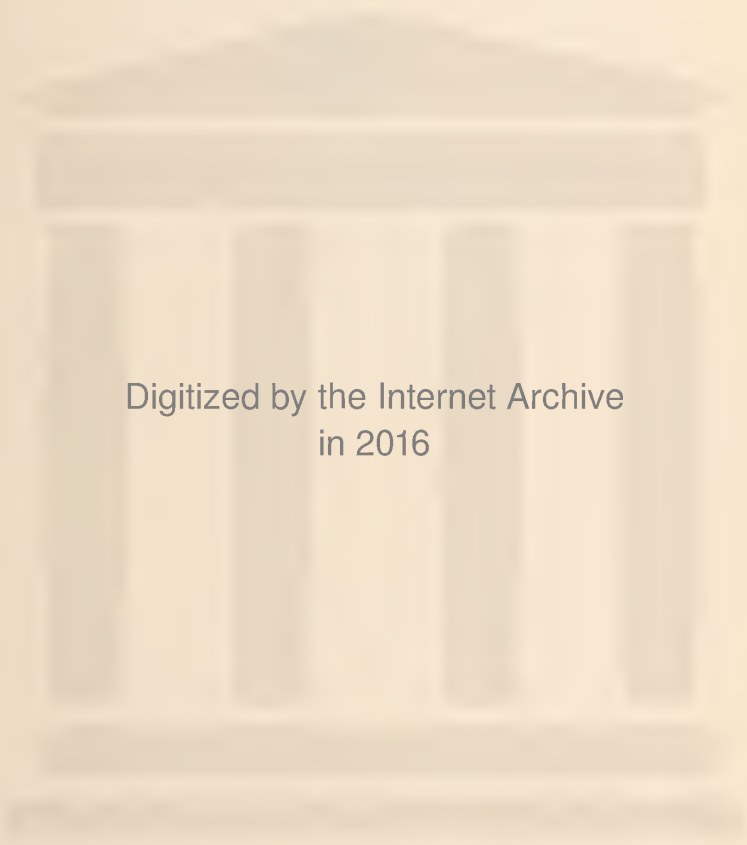
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Editorials

The Physician, Past, Present and Future

By Henry W. Briggs, Wilmington, Del.



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Editor

DR. ALBERT ROBIN

701 Rodney Street
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Business Manager

DR. J. W. BASTIAN

915 Washington Street
Wilmington, Del.

Assistant Editors

DR. G. I. MCKELWAY

Dover, Del.

DR. H. W. BRIGGS

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Vol. VI

DECEMBER, 1915.

No.13

THE MUNICIPAL HOSPITAL FOR CONTAGIOUS DISEASES.—A committee representing the Chamber of Commerce and headed by Dr. H. Howell, our former Mayor, is now making an effort to revive the agitation for a municipal hospital. The need of such an institution is no longer questioned. The city is growing rapidly, the congestion in the poorer districts is becoming greater and the possibility of proper isolation and quarantine more and more difficult. Among the poor it is practically impossible to isolate a child ill with diphtheria, scarlet fever or measles and to enforce a proper quarantine would mean absolute starvation to the family; consequently, the health officers do not attempt to enforce the quarantine regulations, and the system is a farce, inasmuch as it is not operative where it is needed most.

Aside from this public health aspect of the case, there is the broad humanitarian side. There is certainly no reason why the appeal made by the child stricken with pneumonia, or other non-contagious ailment should be met by the establishment and maintenance of hospitals, while the child ill with diphtheria, scarlet fever or measles should be left to the chance care of an ignorant mother under surroundings which are anything but conducive to recovery. How many

children ill with diphtheria die for want of proper medical attention and proper nursing? How many children with scarlet fever develop serious complications as a result of neglect? How many children suffering from measles develop fatal pneumonia because of improper care? If it is right and proper to have hospitals for the sick, surely, the victims of contagious diseases need hospital care the more. If private philanthropy will not provide such institutions, the city should.

However, there is no hope that the City Council will consider the matter favorably unless there is an insistent demand from the "constituents," and these dear "constituents" will not make the demand, unless prompted to it by the medical profession in this city. It is clearly up to the doctors. If our physicians are to remain true to their calling; if they recognize their obligations to the public; if they are to live up to the high ideal of self-sacrifice for the sake of a suffering fellow-being; if they are to remain the leaders in the community in all that is noble and high-minded,—in short, if they are to be the kind of doctors who "are more than armies to the public wheel," they will take up this matter of a municipal hospital and bring it to a satisfactory termination.

Knowing the many splendid and public-spirited men in our profession, as we do, we are sure they will.

THE ANNUAL BANQUET OF THE PHYSICIANS AND SURGEONS HOSPITAL ASSOCIATION.—It was a splendid banquet which was made highly instructive by an address delivered by Dr. McFarland, Professor of Pathology and Bacteriology of the Medico-Chi. Prof. McFarland is not only one of the foremost pathologists in the country but a charming speaker, and he made his remarks on a rather technical subject quite entertaining. He spoke of the progress in the study of the etiology of cancer. How one after another of the "discoveries" of the causative agent has been discarded, and at present we know no more about cancer than did our forefathers. Fashion dictated many of the alleged discoveries. The cellular doctrines of Virchow led to the theory of embryonic cell-inclusion; the discovery of the pathogenisity of bacteria gave rise to the theory that bacteria are the cause of cancer; the observation that fungi cause disease was the basis of the supposition that cancer is caused by blastomycetes or yeasts; the discovery of pathogenic protozoa prepared the ground for the theory of the protozoan nature of the causitive agent of cancer. Yet the true cause has so far eluded the most painstaking investigations. It also goes to show that science is not altogether a classification of known or demon-

strable facts, but rather a grouping after the truth through a succession of hypotheses. The men of science use their imagination almost as freely as poets, and because a certain statement issues from a scientific laboratory is no guarantee that it is an established fact.

It is understood that the Physicians and Surgeons Association, contemplate several meetings at which well-known specialists will address them on various subjects pertaining to their respective specialties. This is a very wise program. The day of trashy papers is gone. We are all too busy to waste an evening in listening to a dissertation bodily lifted from a text book. When we come to a meeting we want to learn something and not play the role of indulgent listeners, like the grown-ups at theatricals of school children. How much better, then, is it to lay our pride aside and invite a real teacher to teach us. There is no reason why a medical society should not become a post-graduate school with definite courses of study and such close application by the members as would lead to an increase of knowledge and broader vision.

We have repeatedly urged the County Medical Society to arrange a course of lectures to be delivered by well-known men who are authorities on the subjects to be taken up, but a false pride and a "know-it-all" attitude seemed to be in the way.

CHRISTIAN SCIENCE AMONG SAVAGES.—If the followers of the late Mrs. Eddy are still resting under the blissful impression that their creed is the only true original revelation, the news that the science originated among the African savages some twenty years ago will come as an unpleasant shock. It appears that some twenty years ago a chief, Mugema, got it into his head that it was wrong to take medicine because God is the healer. The theory developed until he contended that doctors are the successors of the evil one because they try to prevent people from dying when it is God's will for them to die. In 1912 he wrote the synod protesting against the offering of prayer in the churches (during the week of universal prayer) for doctors, hospitals, dispensaries and medical missions. His following has been small until recently when a native preacher, Malaki, joined him and began baptizing any who would pronounce the anti-medicine shibboleth. Various thousands were in this way brought into "The Church Which Does Not Use Medicine,"—the Uganda analogue of the Christian Science Mother Church in Boston. They repudiate monogamy as not or-

daigned in Scripture and insist that taking medicine is the unforgivable sin against the Holy Ghost.

Thus "great minds run in the same channel."

The Physician, Past, Present and Future

By HENRY W. BRIGGS, Wilmington Del.

I desire at this time to complete what I attempted to say to you at the time of my election to this office and express my sincere thanks for your confidence in making me your president during the past year of this, the second oldest State Medical Society in this country.

I am impressed that my successors to this office in the years to come should be chosen, not merely because of geographical relations, but most of all because of their love for and interest in our honored society and their willingness to sacrifice, if need be, personal interests for the promotion of its welfare. I count it the greatest honor and privilege of my professional life to be a member of our county and state medical societies and finally a fellow of the most wonderful medical organization the world has ever known, the American Medical Association.

I would ask that every member take an active interest and can assure each and every one of you that you will never regret any of time or talent spent in this manner.

And now I will take up the subject of my address, which for want of a better name I have given the title: "The Physician, Past, Present and Future.

The origin of medicine and civilization were probably simultaneous. The lower animals when sick or wounded instinctively lessen or alter their diet, seek seclusion and rest, and in certain cases seek out some particular herb or healing substance. The savage, in his primitive state, has by experience and superstition, been led to observe certain forms and customs in cases of injury and disease.

Probably the earliest authentic record of the mention of our profession is taken from the Scriptures, when in about 1700 B. C. Joseph commanded his servants and physicians to embalm his body, thus showing that Egypt at that time possessed a class of men who practiced the healing art. This was 1700 years before mention was made of the Great Physician as typified in the Christ.

The medicine of the Hebrews is known generally through the Sacred Scriptures, especially through the writings of Moses, which embraced rules of much precision especially in public hygiene. The book of Leviticus is largely a compilation of rules concerning matters of public health.

The 11th Chapter proscribes the use of the meats of the hog and rabbit; the 12th to the 15th Chapters are designated to regulate the relations of man and wife and the purification of woman and advocate the measure of circumcision, still observed as a religious rite among the descendants of Moses. Solomon in his writings also shows a high decree of knowledge of natural history and of the compounding of remedies highly useful for the relief of human suffering.

Traditions of the ancient Indian and Chinese races are rich in superstitions and customs which are significant of the healing art.

It is probable that Greece furnishes the first authentic history of anything which looks toward the systematization of empirical diagnosis and treatment of disease in the person of Aesculapius of whom we are still often quoted as being followers. His followers and the priests in the temples dedicated to him, soon formed a separate caste and transmitted from one to another, as a family heritage, their medical knowledge. The practices of these priests were co-incident with religious rites, being carried on principally in the temples, and many of their customs and practices, even in the light of subsequent knowledge, we find to be of much value. Their temples were usually located near thermal springs or fountains and among groves. People came from long distance to these locations as health resorts. A well-regulated diet, pure air, temperate habits, venesection, purgatives, emetics, friction, sea baths and mineral waters were prescribed as they were indicated, thus in a way following the customs to some extent of our modern sanitoriums of today.

Hippocrates, a direct descendant of Aesculapius, was a central figure in the history of ancient medicine and to him we are indebted for the first writings bearing directly and exclusively upon our profession, which considered in the light of the restricted sources from which his knowledge was taken, are equal in importance to the modern volumes of scientific medicine. He gave the classifications of epidemic and endemic forms of disease and clearly pointed out the differences between acute and chronic. He wrote extensively on internal disease, making special mention of particular forms of it, as epilepsy and hysteria. His writings prove that he was a remarkably close observer of every symptom of disease. His therapeutics, considering the crude information of his time was nevertheless a vast improvement

on that which had preceded and really entitled him to his title of "Great Physician." He also wrote extensively on external diseases and surgical therapeutics. The following paragraph from his works of twenty-three centuries ago has much food for thought, even for the practitioner of today: "The best physician is the one who is able to establish a prognosis, penetrating and exposing first of all, at the bedside, the present, the past and the future of his patients, and adding what they omit in their statements. He gains their confidence and being convinced of his superior knowledge they do not hesitate to commit themselves entirely into his hands."

With the teachings of Plato and Aristotle, following closely and similar to those of Hippocrates, were laid the first philosophic basis for empiricism. Following closely and extending over a period of 500 years came the anatomic period of age of foundation of medicine, the chief exponent of which was Gallen, whose death occurred 200 A. D.

He was an extensive writer, in all his volumes numbering more than 100. His contributions to anatomy were significant: A monograph on the human skeleton describes accurately every bone in the human body and he advises all medical students to journey to Alexandria that they might study anatomy of the bones directly from the human skeleton, there evidently being none in Rome. He was probably the first vivisector, since he exposed the muscles of living animals and demonstrated how alternate tension and relaxation of different groups of muscles set the bones in motion after the manner of levers and his classification of flexors and extensors remain with us to the present day.

Following the death of Gallen in 201 A. D. and ending with the revival of letters in Europe in 1400, occurred what has been termed the age of transition, during which the center of medical research and development shifted from Rome to Greece. While there were many students during this period noted for research, we still mention but one, Aethus 502 to 575, who seems to have been the first medical man of note who professed Christianity as shown by the following passage from his works: "In the composition of certain medicaments the following words should be repeated in a low voice, 'may the God of Abraham, the God of Isaac, and the God of Jacob, deign to bestow upon this medicament such and such virtues.' Again he recommends that to extract a bone from the throat the following words be pronounced: 'Bone, as Christ caused Lazarus to come forth from the sepulchre, as Jonah came out of the whale's belly, come out of the throat or go down.' "

It would be most interesting and instructive to follow

the history of medicine together with the great number of noble and self-sacrificing men who devoted their life work toward its development, but time will not allow. I will therefore briefly mention a few of the most important events during the years intervening, leading up to the present era of medicine.

The discovery of the circulation of the blood by William Harvey in 1628, after 15 years of proofs and counter proofs of every kind, met with bitter opposition of his contemporaries. So great was the opposition that he was openly criticized as a fanatic and was even held to be demented. This theory which today appears so natural that we seem at a loss to know why it was not sooner discovered, caused nothing less than a revolution in physiology and anatomy and has proven to be one of the most important in medical history.

The century following the discovery in the circulation seems to have been given up largely to experiment and progress along the line of surgery and it was during this period that the famous surgeons William and John Hunter lived.

In 1749 was born Edward Jenner, who was known as the "Father of Vaccination." His father was a clergyman and he early began the study of medicine and surgery. Early in his professional career he received from a milk maid information of the protective power of cow-pox against variola. This information so impressed Jenner as a means of affording protection to the entire human race that the subject never left his mind. His first vaccination was performed in 1796 upon a boy with matter taken from the hand of a maid who had contracted cow-pox in milking.

Two years later, in 1798, he published a book recording the results of his observations and was given a reward by the government of \$150,000. He died in 1823 and has since been regarded as one of the brightest lights of the profession.

In 1809 Dr. Ephriam McDowell performed the first rational and deliberate ovariectomy, the patient living for 32 years after the operation. It was performed without an anesthetic and under circumstances such as he has brought to his memory undying fame. This operation made him practically the father of modern abdominal surgery and Americans and Europeans alike are delighted to place that honor to the credit of his memory.

The discovery of ether as a general anesthetic was one over which there was much discussion and bitter wrangling, but the consensus of opinion has emphatically placed that honor upon Dr. William T. G. Morton, who gave the first practical demonstration of etherization at the Massachu-

setts General Hospital before the medical staff of that institution on October 16, 1846. This event stands out as a prominent landmark in the history of medicine and surgery, and has played a most important part in the development of modern surgery.

It is safe to assert that greater progress has been made in all branches of medicine in the last 100 years than during the previous 1000 years, due largely to improved methods of investigation and diagnosis. Such results have been made possible in a large measure by better teachings in chemistry and physics, in inventions of more accurate instruments of precision, to experimental laboratory work and more scientific methods and system in the recording of cases of disease and the results of the different treatments.

The more accurate study of the etiology of disease and cause of death and their recording as statistics; the discovery of general anaesthetics; the adoption of asepsis and antisepsis in surgery and the development of bacteriology, have each served its purpose in the rapid advancement in the work of our chosen profession.

It is within the recollection of many living members of this society that the first scientific demonstration was made proving absolutely that certain specific micro-organisms were the direct causes of certain diseases. As a practical result of such information we have at our command in combating disease, all the triumphs of aseptic and antiseptic surgery, a much greater accuracy in diagnosis and the use of specific anti-toxins as remedies and preventitives, and an unlimited scope in the carrying out of measures of public hygiene and sanitation.

The records of modern surgery probably furnishes the clearest and most direct evidence of the increased powers at the physicians command for the relief of human suffering and the prolongation of human life. A large proportion of certain cases upon which the modern surgeon of today operates with success were 100 years ago considered hopeless, and the patient doomed to a lingering and painful death.

Conditions such as sounded the death knell in those days are, if taken sufficiently early, now relieved and cured in a comparatively short time. Thousands of men and women are now yearly saved and continue to be useful citizens by the simple removal of the vermiform appendix, where in former days the cause of death was given as inflammation or obstruction of the bowel, or peritonitis. Removal of renal calculi and gall stones, excision of brain tumors, gastro-enterotomies for both benign and malignant conditions, reparation of wounded intestines and the many abnormal conditions relieved by plastic and orthopedic surgery are

but a few of the triumphs of this special branch of our work as medical men.

When in the days of old, the physician saw the eyelids of a new born babe inflame and swell and yellow matter ooze from between them, he knew that within a few days or weeks the child would be wholly or partially blind, but when the micro-organism causing the disease was discovered, it was but a step to find its remedy and today blindness from ophthalmia neonatorum should be unknown.

In a great measure the modern progress of medicine is a result of improved methods of diagnosis and the use of instruments of precision. The clinical thermometer is of comparative recent date. The diagnosis of diseases of the heart and lungs have become greatly expanded through auscultation and percussion, especially by the use of the stethoscope; the test tube and microscope warn us of incipient kidney disorders; the blood pressure devices give valuable information of certain pathologic conditions, and the wonderful Roentgen rays, at first considered useful only as an aid to the surgeon in the location of foreign bodies and the exact nature of bone injuries, have now taken their place as valuable adjuncts in the diagnosis and treatment of many diseased conditions.

Bacteriological examinations now early makes positive the diagnosis of diseases produced by micro-organisms, giving the advantage of proper prophylactic and curative treatment in incipency.

Probably the most important advance during the last half century has been the progress made in preventive medicine, this in turn being largely the result of the discovery of the micro-organism etiology of disease. The recognition of the importance of pure food and water supplies and of proper drainage and sewerage, has had a marked influence on the spread of contagious and infectious disease.

The completion of the greatest work of modern engineering the world has ever seen has been made possible by preventive medicine; the great Panama Canal stands as a monument to modern medical science.

The public has been greatly benefited in the modern progress of medicine by the establishment of well-equipped hospitals and the employment in private practice of the skilled trained nurse. Cases of severe illness or injury, or those requiring major surgical operations, can be better treated in well appointed hospitals than in private houses. The public is rapidly becoming educated up to this fact and the old antipathy against the entrance into a hospital is fast disappearing. The building of better hospitals and improvement in the management of same have kept pace with

the progress of modern medical knowledge and these institutions will in the future no doubt play a more and more important part in the treatment of the sick and injured.

The world's history shows that all progress in civilization is attended with injury to individuals.

Trained nurses have superseded unskilled labor. The private practice of many physicians has been decreased by hospital service, improved methods of hygiene and sanitation, pure food and water supplies, vaccination and every prophylactic and preventive measure to check the inception and spread of disease is a distinct disadvantage to the trade side of medical practice, yet the profession of today almost to a man advocate the adoption of every such measure and the public at large receive the direct benefits.

Probably the most important features in the progress of medicine during the last half century has been the discovery of new methods of scientific investigations, most pronounced in the fields of bacteriology and pathology and the corresponding productions of the various anti-toxins, serums and anti-bodies for the treatment of diseases produced by these micro-organisms. These methods have as yet been only partially applied and a much wider scope and more practical applications will result in the near future.

We can hardly hope for the discovery of an Elixir of Life, and increasing feebleness of old age will continue to be the result of increased years, for the tissues and organs of each individual have a definitely limited term of duration peculiar to that particular person.

Many of the diseases and conditions however, which make life a burden in advancing years can now be palliated, so that if by "reason of strength" years are added to the allotted three score and ten, those added will not of necessity involve labor and sorrow.

What, then, is the outlook for the physician in the future? The remarkable progress of scientific medicine during the past quarter of a century marks but the beginning of still greater results to be accomplished in the near future.

The day of empiricism is fast disappearing and the dawn of rational, scientific and accurate measures in the practice of medicine is rapidly approaching, and well-educated, well-trained, scientific men and women will in the future be necessary to put into successful practice this elevated standard of medical practice, recognition of which has already worked a revolution in medical education.

The physician of the future must of necessity be one of the best educated men in the community and it will become more and more the duty of the state to see to it that only such men are licensed within its borders as are qualified

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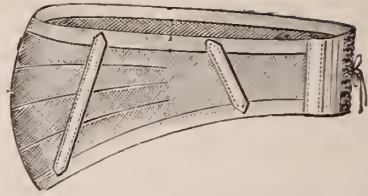
for the practice of scientific medicine. It is significant to note that during the past two years more than twenty-six millions of dollars have been appropriated for the benefit, directly or indirectly, of medical education, and the number of medical colleges in this country reduced 33 1-3 per cent., the tendency being to confine medical education to large medical centers, under the patronage of the university controlled and supported by the state.

Is it too much to expect that even in our own generation we may hope to see the day when a specific for every germ disease shall become a part of our therapeutic measures for the relief and cure of disease, not excepting the dreaded germs of malignancy and tuberculosis. God hasten the day when we as physicians shall go forth with every confidence in our ability to prevent, alleviate and cure every disease to which the human race is heir, and prolong human life even beyond its allotted three score and ten years.

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By Curtis E. Lakeman

Resolutions Adopted by the American First Aid Conference

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Business Manager

DR. J. W. BASTIAN

915 Washington Street
Wilmington, Del.

Assistant Editors

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MEDICAL ORGANIZATION.—There is an apparent disposition on the part of general practitioners to regard their County, State and National Societies sanctioned by time-honored usage but of little practical value to the individual doctors. While the majority of members pay their dues they do not consider it worth their while to contribute towards the programs of the meetings or to attend the meetings. Many physicians do not even care enough for the society to be enrolled as members. The few who attend do so from a point of duty or feeling of fellowship. Possibly, the individualistic character of medical practice is in a great measure responsible for this attitude. When there is no community of interests association is likely to be forced and uninteresting. Each doctor does his own work in his own way, has his own circle of admiring patients, and is the centre of a little world of his own, which he guards very jealously against possible intruders. Seldom are the interests of any two doctors in common, most often they clash, and as a result bitter feelings are engendered and frequently nursed to the point of positive hatred. Under such circumstances there is little desire to co-operate, unless it be for the purpose of fighting some common enemy. Whatever may be said of the medical profession as a whole, the mo-

tives which underlie individual practice are far from altruistic. Each doctor endeavors to make a living and have as large an income as he possibly can. As the source of income is rather limited, then is continuous rivalry for a better place at the source. If there is only one spring with a lot of thirsty people around, it is natural to expect every one to push towards the spring. The younger and more vigorous will try to elbow their way, while the older men, who have come first, will resent the intrusion.

However, there is a decided change taking place in the practice of medicine, which makes co-operation necessary on purely selfish grounds. The art and science of medical practice is ever broadening, and the public is becoming more enlightened as to the proper functions of a physician. Our ready means of communication make it possible for the sick at a distance to consult eminent physicians at the large medical centers. There is a growing demand for better and more thorough work, particularly along the lines of diagnosis. Every doctor is now expected to be up to the highest efficiency, or he will be simply dropped.

The only way to develop this efficiency is by team work or co-operation. To make a diagnosis of some obscure ailment the physician must call to his aid the pathologist, the specialist on the diseases which permit of specialization, the x-ray man, and at times the surgeon. Furthermore, he must keep abreast of the times and take an active interest in the more recent development of medical science. The so-called new medical "discoveries" promptly find their way into the lay press, and it is rather humiliating for the doctor to admit ignorance of things which his patient already knows. Only a live medical society can make it possible for the doctor to keep up his stock of information. At the meetings men interchange the knowledge they have acquired either from reading or experience, and thus the society becomes a sort of a post-graduate course.

Do you want to be a progressive up-to-the-minute physician? Attend your society meetings and see to it that they are made interesting and instructive.

Do you want to remain an obscure practitioner who ekes out an existence from the more ignorant and less discriminating population? Stick to your office and count the nickels.

The Organization of National and Local Forces in the Campaign Against Cancer

By Curtis E. Lakeman, Executive Secretary, American Society for the Control of Cancer.

The American Society for the Control of Cancer has recently urged that every state medical society take an active part in arranging meetings and in spreading among all members of the profession the latest knowledge of malignant disease. At the suggestion of the cancer committee of the Pennsylvania State Medical Society, many journals will devote their July issues to this subject. It has been pointed out that the American Society for the Control of Cancer might take this timely opportunity to state its view of the relations between the various bodies which are concerned in this campaign. The suggestion is welcome. If indeed a clear understanding can be reached as to the most effective division of functions and duties among the various organizations, national, state and local, interested in this subject, a long step will have been taken toward the conquest of malignant disease, insofar as that ideal can be approached by the practical application of present knowledge.

THE NATIONAL SOCIETY.

The American Society for the Control of Cancer sets up no claim of priority or originality in preaching to the public the necessity of early recognition and treatment of this disease. The organization was effected under the inspiration of numerous similar movements in this country and in Europe. From the first it has been inspired only by a sincere ambition to co-ordinate all existing forces into a single irresistible nation-wide effort to reduce the cancer death rate by imparting the necessary knowledge and inspiring the will to believe and act upon it. Those who direct the policy of the Society have no illusion that they are "called" above others to this task. They firmly believe that all sincere workers should unite in a single well considered national movement. If the present society fails to meet the requirements of such a movement it must give place to some agency that will do so, leading the campaign against malignant disease with as conspicuous ability and success as the National Association for the Study and Prevention of Tuberculosis has directed the war on consumption.

RELATION TO THE PROFESSIONAL SOCIETIES.

While the Cancer Society found its first impulse in the work of a committee of the American Gynecological Society, the movement was broadened at its very inception by the appointment of organizing delegates from the American Surgical Association, the American Dermatological Association, the Association of Pathologists and Bacteriologists and practically all the similar special organizations which met in Washington in May, 1913, as the Congress of American Physicians and Surgeons. Definitely launched in New York on May 22, 1913, the movement received within a few months the official endorsement of the American Medical Association, the Clinical Congress of Surgeons, the Western and the Southern Surgical and Gynecological Societies and a number of sectional and state organizations. All these professional bodies have endorsed the design of the National Cancer Society as expressed in its Constitution:

"To disseminate knowledge concerning the symptoms, diagnosis, treatment and prevention of cancer, to investigate the conditions under which cancer is found and to compile statistics in regard thereto."

RELATION TO CANCER RESEARCH.

It will be seen that this purpose comprises not only the conduct of an educational campaign but the gathering of information in regard to this disease. In what relation, then, does the society stand to the various American cancer research institutions and workers? The answer is that the society does not contemplate the prosecution or support of biological research, already so ably pursued under the auspices of our leading universities. With these workers in the field of pure science mutually helpful relations have developed. Indeed a notable collective expression of their attitude is regarded as a very corner stone of the educational movement. A few years ago the eminent laboratory students placed on record in the transactions of their official organization, the American Association for Cancer Research, their conviction that pending the discovery of the ultimate nature and cause of cancer, a far more effective dissemination and utilization of the vast store of present knowledge of the disease is urgently called for. Formed to carry out this very object the "Control" Society depends upon the constant support and co-operation of the institutions represented in the "Research" Society. Many of the foremost American students of cancer are prominent in the membership of both organizations. Machinery is thus provided for the wider dissemination among the profession and the people of the

essence of the newest knowledge of malignant disease, fresh from its laboratory sources.

RELATION TO STATISTICAL INVESTIGATIONS.

The Society does, however, contemplate original work in the collection and collation of statistical data, and will expand this feature of its program as fast as its resources permit. The statistics of cancer mortality need to be improved both as regards their collection and their publication. The merest suggestion by the Society to the U. S. Census Bureau has been sufficient to initiate a notable advance in this respect. With the greatest possible interest and zeal, Mr. Harris, the late Director of the Census, and his successor, Mr. Rogers, have undertaken the preparation of a special report on the cancer mortality of the U. S. Registration Area in 1914. The number of deaths will be stated in full detail under some thirty titles of organs and parts of the body affected, instead of, as hitherto, merely under the six general groups of the international list. The Imperial Cancer Research Fund has long urged that it is only on the basis of such detailed data for the various organs that a true conclusion can be reached as to whether or not cancer is increasing. For the first time in the United States the data will now be at hand, as it is in England and Wales through the reports of the registrar-general, for the prosecution of such inquiries.

The census bureau will also for the first time in this study, make a distinction between returns based on certain and on doubtful diagnosis. To secure the additional information needed for this distinction, the bureau is sending tens of thousands of letters to physicians who have certified deaths from cancer asking whether the diagnosis was based on clinical findings alone or was established by surgical intervention, microscopical examination, or autopsy.

All this, it will be realized is a large amount of work for even a government bureau to undertake. Much of it should be done in the first place by the registration offices and the boards of health of the several states, where the original certificates of death are filed. It will be the duty of the American Society for the Control of Cancer to urge upon the various state officials the need of undertaking this work in order to insure the permanence of the advance in the statistical study of cancer which has been inaugurated by the census bureau.

But the society is also interested in special statistical studies of the geographical, racial and occupational distribution of cancer, and above all in collating, upon a uniform plan, the records of surgical treatment of the disease in the

leading hospitals. It is important that an authoritative answer be available for all who ask just what percentage of success is to be expected in the treatment of each phase and each stage of this multiform disease. All such studies the society regards as fulfilling its fundamental purpose and in pursuing them it is everywhere receiving the most cordial encouragement and assistance from statistical offices and from the best hospitals and institutions.

RELATION TO EDUCATIONAL AGENCIES.

The important and clearly established lessons derived from such studies of the sources of information must be given to the public. The society has undertaken to do this directly, through its publications, its regular articles for the newspapers and its lectures. But in the large view it can best secure this object by enlisting the co-operation of all appropriate existing agencies which conduct educational work. Foremost among these are the state and local departments of health, especially those which are devoting an increasing share of their energies to the spreading of the gospel of health by bulletins, exhibits and lectures. In the same category must be included the committees on public instruction which in many states are conducting admirable campaigns of health education under the auspices of the state medical societies. Toward all these agencies the society stands in the relation of the "producing" to the "distributing" end of a manufacturing business. With its wide outlook over the national field it is in a strong position to provide statistical material, to receive and pass on new knowledge, new experience, new methods which have been found valuable in one field and should be used in others. In another view the society may take the position of "middleman" between the research workers and statistical students producing new facts about cancer at the sources of knowledge on one hand, and on the other the many agencies, general and local, which will bring the practical bearings of this knowledge, new and old, directly home to the people. In general, then, one of the most useful functions of the society is to act as a bureau of information and clearing house which is at the service of all workers and institutions interested in the study and control of cancer.

RELATION TO STATE COMMITTEES.

The relation of the national society to similar movements within the various states should be clear from what has been said. In no case will the society seek to set up local agencies to parallel work already adequately organized under the auspices of state medical societies and boards of

health. Provision is made for local committees to be organized under the supervision of the resident directors of the National Society wherever no state or local agency is in a position to undertake the work. Such groups will not be formed, however, except under full agreement with present state agencies. Where, as in Pennsylvania, under Dr. Wainwright, and similarly under the auspices of state medical societies in Maine, Wisconsin, Kansas, Colorado, Louisiana, Texas and many other states, active local committees are at work, every effort will be made to assist these groups in the manner already outlined and so far as the constitutional limits of size permit to secure from them representative delegates to the governing council of the National Society. At least one director from each state will eventually be chosen to act as a local correspondent who will inspire and stimulate work in his own state while at the same time assisting in formulating the general policies of the National Society.

RELATION TO OTHER GENERAL COMMITTEES.

It is an earnest of the good feeling and harmony with which the cancer campaign is evolving toward a single coherent national movement to consider the high degree of integration with other national agencies which has already been attained. Some of these had begun effective work long before the present society was established. Aside from such admirable local campaigns as that of the Pennsylvania Commission and the work inspired by Dr. C. C. Carstens in Michigan, the Clinical Congress of Surgeons of North America had in the field an active committee on cancer under the chairmanship of Dr. Thomas S. Cullen of Baltimore, the other members being Dr. Simpson, of Pittsburgh, and Dr. Howard C. Taylor, of New York. This committee, as is well-known caused the publication of widely read and influential popular articles by Samuel Hopkins Adams. It is instanced merely as indicative of the get-together spirit that animates the National Society that all three of these men naturally took their places as members of the Executive Council of the new association. Subsequently the American Medical Association appointed a cancer committee representing its council on health and public instruction, and again to avoid duplication of effort the same men were made members of that committee. Dr. Frederick R. Green, the capable executive of this Council of the American Medical Association, has been from the first, a director of the Cancer Society, and has given invaluable advice and co-operation in its publicity campaign, printing every work in the press bulletin of the A. M. A., a popular article on

cancer prepared by the society, which thereby reaches 3,000 or more editors in all parts of the country.

A similar identity of committees has been effected in local fields, especially in Minnesota, and is typical of the desire to carry on everywhere a well-co-ordinated national campaign which shall embrace representation from all the principal local agencies and shall thus move forward with absolute harmony and unity of purpose to the accomplishment of its difficult but glorious ideal—the progressive reduction of the mortality from this historic scourge of mankind.

RESOLUTION ADOPTED BY THE AMERICAN FIRST AID CONFERENCE.

Washington, D. C., August 24th, 1915.

Your Resolution Committee has the honor to report that it has carefully considered the resolution which was committed to it and has redrafted it as follows:

Whereas, There is a great lack of uniformity in first aid methods; in first aid packages, and in other first aid equipment; and in first aid instruction, and

Whereas, Many of the aims of first aid are defeated thereby and needless suffering and expense incurred,

Therefore, Be it Resolved:

That this Conference recommends to the President of the United States that he appoint a "Board on First Aid Standardization," said Board to consist of one officer each from the Medical Corps of the U. S. Army, the Medical Corps of the U. S. Navy, the U. S. Public Health Service, the American National Red Cross, the American Medical Association, the American Surgical Association and the Association of Railway Chief Surgeons of America; this Board to deliberate carefully on first aid methods, packages, equipment and instruction and to recommend a standard for each to a subsequent session of this Conference to be called by the permanent chairman; the creation and maintenance of the said Board to be without expense to the United States.

Your Committee further reports that it has personally consulted the Assistant Solicitor of the Treasury and he has given the opinion that there is no legal objection to the resolution or its purpose.

The Committee has also personally consulted the Secretary to the President and he has assured your Committee

that it is his personal opinion that the President will take favorable action in the premises.

W. C. Rucker, Asst. Surgeon General U. S. P. H. S.

Major Robert U. Patterson, M. C. U. S. A.

Representing the Amer. Nat'l Red Cross.

W. L. Estes, Chairman Comm. on Fractures,

Amer. Surg. Asso.

Committee on Resolutions.

FIRST MEETING, WASHINGTON, D. C., AUGUST 23 AND 24, 1915.

The following resolution was passed at this meeting: That the questions noted below be sent to the Chief Surgeons of Railroads, Mines and Manufacturies, first, to be answered by them; second, that a copy of these questions be sent by the Chief Surgeons to their Associate Surgeons.

The object of these questions is to attempt to get the opinion and experience of a number of surgeons and to formulate them for publication.

Please answer each question on a separate sheet of paper and sign your name to each sheet:

1. What has been your experience with the most available first aid package and dressing for small and large wounds.

2. What has been your experience with the immediate employment of antiseptics in accidental wounds; what antiseptic have you used, in what strength, and how applied? Have you employed tincture of iodine; if so, how and what have been the results?

3. What in your experience has been the most efficient and most readily applied method of fixation for injuries of the (a) upper and (b) the lower extremity?

4. Have you considered the construction of a stretcher, which, in addition to serving as a means of transportation of injured, will have appliances for the fixation of the upper and lower extremity, somewhat along the lines of a Bradford splint, or the Gihon naval splint?

5. Please state your views on some liquid ointment dressing which would be available for first aid in large wounds and burns with the object of preventing the usual dry-gauze dressing adhering to the wound and rendering subsequent dressings painless.

These questions have been sent to all the members of the Association of Railroad Chief Surgeons of America, and a few other civil and military surgeons.

Please give these questions your personal attention, first, and mail your answers to the secretary, at the same time writing him and giving him the number of copies of

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Very sincerely yours,
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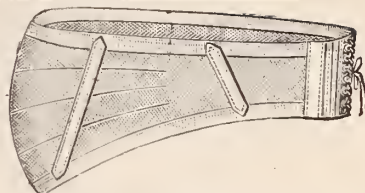
SYMPATHETIC OPHTHALMIA TWENTY YEARS AFTER INJURY.

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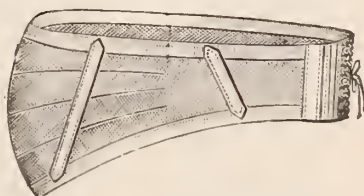
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Editor

DR. ALBERT ROBIN

701 Rodney Street
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Business Manager

DR. J. W. BASTIAN

915 Washington Street
Wilmington, Del.

Assistant Editors

DR. G. I. MCKELWAY

Dover, Del.

DR. H. W. BRIGGS

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No. 3

THE PRACTICE OF MEDICINE IN THE FUTURE.—It would appear at first glance a downright insult to compare our time-hallowed medical profession with a commercial pursuit or industrial development, yet, the same law of evolution underlies both. In fact, this law applies with equal force to development in the organic world, from the simple ameba to the elephant, as it does in human progress which culminated in what we designate as civilization. The law is: There is a constant evolution from the simple to the complex accompanied by a correlated division of labor. It is simple enough to show how in the all-in-one ameba the organs of locomotion, digestion assimilation, secretion and excretion are not differentiated and the various functions are assumed vicariously by our bit of protoplasm or another. It is easy to follow the evolution into the higher animals and observe how special functions are assumed by specialized organs, how these functions are correlated and interdependent. This specialization finally assumes in the higher animals such a degree of refinement that we are baffled by its very complexity. Let, everywhere we see the same underlying principle, the guiding spirit, as it were. In human pursuits the same holds true. It would take a volume to show how human society has evolved from the simple to the complex, but we

are not writing a treatise on the subject. It is sufficient for our purpose to indicate the evolution from the simple to the complex in every human endeavor which constitutes an integral part of our social organization. In commerce, observe how the small producer who also sold his produce evolves on the one hand into a manufacturer who no longer retails his product, and on the other into a merchant who sells the different products of a number of manufacturers. Follow the career of the small merchant who combined in his own person the buyer, the seller, the bookkeeper, cashier, the janitor and all-around man; who had an intimate knowledge of his entire stock in trade, representing a dozen or more departments; see him evolve into a Wanamaker whose store represents a most highly organized and differentiated business. Is it not comparable to the evolution of a simple undifferentiated cell into a highly complex organism? Compare the small workshop of an all-around mechanic to the Ford Motor Company, and the same principle of evolution becomes evident.

The force that actuates evolution is demand. In the organic world it is the demand made of the individual by the environment. In human society, it is the demand of the people. In every instance this demand is the driving force which acts on the individual compelling him to satisfy it or perish.

Let us now throw a glance at the physician of bygone days. We see him encompass the art and science of medicine with enough room left to take up some side subject or devote his spare time to politics, commerce or similar pursuits. Even if he was thoroughly conscientious he could practice all the branches of the medical art with a fair degree of thoroughness. He could be internist, surgeon, obstetrician and specialist and be honest about it. If he should happen to have been a very able man he could actually perform his multifarious duties with great credit to himself and honor to his calling. What is the situation today? If an internist, he must be expert in physical examinations, bacteriology, serology, medical chemistry, clinical pathology, reutgenology and have an intimate knowledge of the special diseases that may present themselves for diagnosis. Is he a surgeon, then he must know everything the internist knows and in addition be master of his own specialty. This applies with equal force to every specialist, since every organ in the body is interdependent with every other organ and conditions originating in one may show reflectly in another, as for instance, rheumatic arthritides being often due to diseased tonsils, or certain conditions of the eye originating from general systemic disturbances. What human mind can grasp all this?

And if the mind could grasp it, is there a man living who could acquire the necessary technic, if he lived as long as Methuselah. It is obvious that the practice of medicine has reached such a high state of differentiation that no single individual, no matter how brilliant, can satisfy the demand for perfect service in its various branches. It is equally obvious that with this differentiation must come specialization, and this specialization must be correlated, or the tail will wag the dog. In other words, we have reached the stage where groups of practitioners must be formed, each group made up of men specialized to do certain things. The organization of these groups is not likely to be as difficult as may be imagined. Self-interest will soon teach men to combine their efforts. In a city like Wilmington, it should be easy enough to organize a group of men made up of an internist, surgeon, reutgenologist, laboratory man, obstetrician and gynecologist and one or more specialists. They could all have their offices in one building and share in the income from the office practice only. Outside the office work each would have his own private practice and do what he pleases. In smaller towns, smaller groups could be formed. These combinations would prove satisfactory even from a purely commercial standpoint. The expenses would be lessened while the income would be increased through larger opportunities to do remuneration work which at present finds its way to larger cities.

We would like to see a few men in our city with sufficient gumption to start the thing. The only thing they will have to sacrifice is petty jealousies, but these are hardly worth keeping; they become so rancid and ill-smelling with age.

VITAL STATISTICS.

QUESTIONS IN VITAL STATISTICS ASKED IN EXAMINATIONS FOR ENTRANCE TO THE UNITED STATES HEALTH SERVICE.

1. What are vital statistics?
2. What is meant by demography?

POPULATION STATISTICS.

3. How is the population of a city or State ascertained?
4. For the purposes of vital statistics, how is the population of a city or state ascertained for years between censuses?
5. Discuss methods of estimating population for intercensal and postcensal periods.
6. Discuss the relationship between population statis-

tics and birth, marriage, morbidity, and mortality statistics.

7. A city had 100,000 inhabitants at the time of the taking of the Twelfth census (June 1, 1900), and 123,700 at the time of the taking of the Thirteenth Census (April 15, 1910). Give the estimated population of that city as of July 1, 1915, on the basis of arithmetical increase.

8. In a city having a population of 57,600 April 15, 1900, and of 66,300 April 15, 1910, what will be the estimated population as of July 1, 1914, the estimate to be made on the basis of arithmetical increase?

9. In a city of which the enumerated population April 15, 1910, was 66,300, and in which the average annual rate of increase during the previous intercensal period figured on a geometrical basis of increase had been 3 per cent., what will be the estimated population as of April 15, 1915, figured on the geometrical basis of increase?

MARRIAGE REGISTRATION AND STATISTICS.

10. What purposes are served by the registration of marriages?

11. Describe a common method in use in the United States by which the registration of marriages is accomplished.

12. What are marriage rates?

13. How are marriage rates expressed; that is, in what terms are they usually stated?

14. What factors influence marriage rates?

15. In a city having a population of 53,420 inhabitants at the taking of the Twelfth census (June 1, 1900), and of 72,643 at the taking of the Thirteenth Census (April 15, 1910), there were during the calendar year 1913, 576 marriages recorded. What was the marriage rate for the year?

BIRTH RECORDS AND STATISTICS.

16. What purposes are served by the registration of births?

17. What is a birth certificate, by whom should it be made out, and with whom registered?

18. Describe a method in common use in the United States for the registration of births and the compilation of birth statistics for a State.

19. What are the essential data usually required in birth certificates?

20. What are birth rates?

21. How are birth rates expressed; that is, in what terms are they usually stated?

22. What factors influence birth rates?

23. What uses are made of birth records in public health administration?

24. Upon what does the accuracy of birth records and birth statistics depend?

25. The city of E had 125,632 inhabitants on January 1, 1913, and 130,368 inhabitants on December 31, 1913. During the month of June, 1913, there were 247 births and during the month of July, 1913, there were 223 births recorded. Give the birth rate for the city during the period June 1 to July 31, both days inclusive; also give the birth rates for June and July separately.

26. In a city which had a population of 44,360 April 15, 1900, and of 53,230 as enumerated April 15, 1910, and which, during the calendar year 1913 had 1,376 registered births, what was the crude or general birth rate for the calendar year 1913? In estimating population use the arithmetical method.

MORBIDITY REPORTS AND STATISTICS.

27. What are morbidity reports?

28. How are morbidity reports obtained?

29. What are morbidity statistics?

30. How are morbidity statistics obtained?

31. Describe a method in common use in the United States for securing morbidity reports.

32. What purposes are served by morbidity reports? Of what use are they to a local health department? Of what use to a State health department? Of what use to the Federal health service?

33. Why is the reporting of cases of communicable diseases to the health department by practising physicians necessary for the control of these diseases?

34. What factors influence the completeness with which morbidity reports are obtained in a community?

35. Upon what does the accuracy of morbidity reports depend?

36. What are morbidity rates?

37. What are crude morbidity rates?

38. What are specific morbidity rates?

39. How are morbidity rates expressed, that is, in what terms are they usually stated?

40. What are fatality, or case mortality rates, and how expressed, that is, in what terms are they usually stated?

41. The city of F had an estimated population of 324,000 on July 1, 1912. During the year 953 cases of typhoid fever were reported in the city and there were 51 death certificates registered in which typhoid fever was given as the

cause of death. Give the typhoid morbidity rate, case mortality rate, and death rate.

42. The population of the city of G was 11,400 at the time of the taking of the Twelfth Census, June 1, 1900. On April 15, 1910, the population was 14,560. During the year 1912 75 cases of diphtheria occurred in the city. Of the 75 cases 6 terminated fatally. In making a report of the epidemic what would you report the morbidity rate of diphtheria to have been, what the diphtheria fatality (case mortality) rate to have been, and what the mortality rate?

DEATH REGISTRATION AND STATISTICS.

43. What purposes are served by the registration of deaths?

44. What is a death certificate, by whom is it made out, and with whom registered?

45. Describe a method in common use in the United States for the registration of deaths.

46. What are the principal data called for by the United States standard death certificate?

47. What is the registration area for deaths of the United States Census Bureau?

48. What are mortality statistics?

49. What are death rates?

50. How are death rates expressed, that is, in what terms are they usually stated?

51. What are crude death rates, specific death rates, standardized (sometimes called corrected) death rates?

52. What factors influence crude death rates?

53. What effect have variations in age distribution of population on crude death rates?

54. Upon what does the accuracy of death registration and mortality statistics depend?

55. What uses are made of the records of deaths and of mortality statistics in public health administration?

56. How is the data obtained from which the United States Census Bureau compiles the mortality statistics of the registration area for deaths?

57. To what extent do mortality statistics show the actual causes of death and upon what does their accuracy in this depend?

58. On July 1, 1914, the city of D had 51,200 population. During the calendar year 1914 there were 896 death certificates registered. How would the crude death rate for the year 1914 ordinarily be expressed?

59. In a city having a population of 44,360 on April 15, 1900, and of 53,230, as enumerated April 15, 1910, and which during the calendar year 1913 had 932 registered

deaths, give the crude, general, or central death rate for the calendar year 1913.

60. In a city which had a population of 44,360 on April 15, 1900, and 53,230, as enumerated April 15, 1910, and which during the first six months of the calendar year 1913 had 530 registered deaths, express the death rate for this period in terms of an annual rate per 1,000 population.

61. In a city which had a population of 44,360 on April 15, 1900, and 53,230, as enumerated April 15, 1910, there were during the month of April 1913, 103 registered deaths. Give the April death rate expressed in terms of an annual rate per 1,000 population.

INFANT MORTALITY AND LIFE TABLES.

62. What is meant by infant mortality?

63. What are infant mortality rates and how expressed.

64. What are life tables?

PARALYSIS OF INTRA- AND EXTRA-OCULAR MUSCLES FOLLOWING ASPHYXIA AT CHILDBIRTH

Dr. William Campbell Posey presented before the Wills Hospital Ophthalmic Society, a child six months old with paralysis of both external rectus muscles. The condition was attributed to asphyxia at birth, the child being born with the cord wrapped about its neck. The child apparently sees, for it will follow the movements of the hand. Ophthalmoscopically, there is nothing abnormal except undue pallor of both optic nerves. There is pupillary inequality, the pupil of the right eye being the larger one day, and that of the left, the following day. Once, during the examination, the child's face became cyanotic and continued in this condition for several minutes. The mother states that this may occur several times in the day. Dr. Spiller who studied the case, thought that the asphyxiation might have caused cerebral hemorrhage, but that it had more likely led to cellular degeneration. The absence of spasticity and paralysis shows that the cerebral cortex is not generally affected. The patient is taking syrup of hydriotic acid.

FOREIGN BODY IN THE LENS.

Dr. Posey also exhibited a young man from whom he had recently removed a fragment of steel that had been embedded in the capsule of the lens, with the result that normal vision was secured. The points of interest in the case were the absence of all inflammatory or reactive signs following the entrance of the foreign body, through the limbus, into the eye; the glistening appearance of the foreign body, as it

lay in the pupil, on the anterior capsule; and the slight haze that remained in the capsule after the removal of the fragment with the magnet.

DISCUSSION.

Dr. S. D. Risley congratulated Dr. Posey on the ingenious method that he had adopted, and upon his success in removing the foreign body from so critical a position on the anterior capsule. In replying to Dr. Posey's inquiry as to the choice of the powerful magnet, instead of a Sweet or Parker, Dr. Risley said that he thought that the choice should depend not only on the location of the foreign body, but also on its size. If the mass were so located that there would be danger of entanglement of the iris or the ciliary body, and if it were relatively large, he thought that it would be prudent to use the lower powered magnets. He had, in once instance, when the foreign body weighed two grains and a half, seen it projected violently from the eye, fastening itself upon the tip of the Haab magnet, ten inches distant; and carrying with it a large amount of the iris, through the wound of entrance, near the corneal limbus. If the smaller magnet should not prove, on trial, to be sufficiently powerful, it would, Dr. Risley said, always be possible to resort to the more powerful instrument.

Dr. Burton Chance said that he thought it quite surprising to note the behavior of the crystalline lens in its reaction to injuries, particularly when there has been the retention of a foreign body in the lens substance. In many cases, he said, the reaction has been noted as being but slight; whereas, that which sometimes follows a minute incision, in successful operations, is often disastrous. He too, has observed the singular spending of the force of flying foreign bodies after they have perforated the cornea or sclera, so that they merely become lodged in the superficial layers of the lens. Dr. Risley's recital of a case of perforation by a sliver from a glazed brick recalled to Dr. Chance's memory a case of his own, which has occurred in his early days, while serving during the absence of a much older confrere. A sliver of japan, struck off from the painted hinge of a screen door, had penetrated a man's eye. The spicule had perforated the center of the cornea and, without wounding the iris, had become embedded in the anterior pole of the lens, and was projecting from the surface of the lens well into the anterior chamber. The case was seen first, two days after the accident. The reaction had amounted only to a mere annoyance; and, as Dr. Chance was a stranger to him, the patient refused to allow any treatment designed for the extraction of the foreign body. He reported again

on the seventh day after the accident, with scarcely any symptoms; the spicule continued embedded, and, except for a tiny zone about the spicule, the lens was not clouded. The man refused to return for further treatment, and has not been heard of since. Dr. Chance assumes that such wounds of the capsule are clean and smooth, and allow the foreign body to become firmly wedged, thus hindering the access of the aqueous to the lens substance, thereby preventing disintegration, with the consequent chemical and mechanical irritation of the uveal tissues.

THE AMERICAN MEDICAL GOLFING ASSOCIATION.

In accordance with preliminary announcement made in the A. M. A. Journal, previous to the last A. M. A. convention, the American Medical Golfing Association held its first tournament in San Francisco, June 21, 1915. Arrangements were then made for the organization and that is now complete with the following directors: President, Wendell C. Phillips, New York; vice-president, James Eaves, San Francisco; secretary and treasurer, Will Walter, Chicago.

Plans are now being made for the second tournament to be held in Detroit at the forthcoming A. M. A. convention in June.

The directors have decided to list as charter members all fellows who shall have enrolled by April 1, 1916.

All fellows of the A. M. A. who play the game are eligible and may obtain the desired information from the secretary-treasurer, Dr. Will Walter, 122 S. Michigan Boulevard, Chicago.

Members of the British Medical Association have a similar organization for play at their annual meetings, and it is thought that this will add materially to the social interest of the A. M. A. as it has to the B. M. A. conventions.

NEW CASTLE COUNTY NOTES.

By DR. T. DAVIES, Secretary New Castle Medical Society.

Officers elected for 1916—President, Dr. Meredith I. Samuel; Vice-President, Dr. B. Allen Jenkin; Secretary and Treasurer, Dr. T. H. Davies; Board of censors, Dr. H. L. Springer.

Elected to membership—Dr. Victor C. Nah, Dr. H. Chalmers Hickman.

Your annual dues to the county society are now due. The secretary will be pleased to receive your check.

EXTRACT FROM BY-LAWS.

The annual dues shall be \$4, and shall be payable

on January 1 of each year. Any member who shall fail to pay his annual dues by April 1 shall be held suspended without further action on the part of the society and shall not be entitled to medical defense.

Dr. W. C. Speakman gave an "Illustrated Talk" before the New Castle County Medical Society on Tuesday evening, January 18, 1916. Subject: Mutilations of the Jaw and Prosthetic Restoration. The meeting was held at the High School auditorium and was well attended.

METHOD OF PREPARATION OF THE HYPOCHLORITES.

By HENRY D. DAKIN.

The preparation of a solution of appropriate concentration and to be applied directly to the tissues is, so to speak, a solution containing 5% and 6% of hypochlorite of soda.

It can be made very simply in the following manner:

140 grammes of carbonate of sodium dried (or 140 grammes of salt crystals of carbonate of sodium) dissolved in 10 liters of water and 200 grammes of chlorate of lime of good quality are to be added. This mixture should be well shaken and at the end of one-half hour the clear liquid is separated by siphonage from the precipitate of carbonate of lime and filtered through cotton. One adds to the clear filtrate 40 grammes of boric acid and the solution obtained thus can be used directly.

It is important that the boric acid be added to the mixture after and not before the filtration.

A slight additional precipitate may take place but it is of no importance.

This solution must not be kept for more than one week.

Note—The above is being used extensively in the military hospitals of France in the treatment of wounds.

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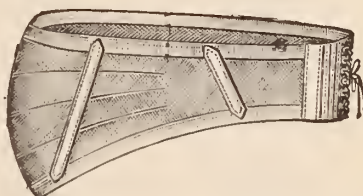
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Editor

DR. ALBERT ROBIN

701 Rodney Street
Wilmington, Del.

Business Manager

DR. J. W. BASTIAN

915 Washington Street
Wilmington, Del.

Assistant Editors

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PREPAREDNESS.—The very commendable and also very creditable showing recently made in Delaware's metropolis in behalf of national preparedness has several lessons for everybody, and to no class in the community does such a slogan as preparedness apply more aptly, more forcefully, and with greater import than to the medical profession. If there be any class to whom preparedness should be a daily gospel, it certainly should be ours.

In the first place, we should be prepared educationally. By that is not meant mere academic erudition, but the broad cultural education that makes the physician the leader he is, and ought to be, in the community. Nor does it imply a university career, with numerous degrees, for many of the high lights of our profession have been self-made, insofar as they have made themselves masters of human knowledge by lonely, persistent effort. No college attempts to cram into one's mind a thousand and one facts, collect a fee, grant a diploma and then label the recipient educated; the education has only been begun; it much be pursued for a life-time. The college course, be it arts, letters, or science, is only the first step towards professional preparedness. In our own calling, the greatest school is, after all, experience, provided

we profit by it. The difference between the wise man and the fool is that the former profits by his own experience, and that of others, too, while the latter learns nothing from his own experience, and treats that of others with contempt. It behooves us to see that we progress with the times, that we keep apace with the newest and best, that we are prepared to make the next step because we have faithfully taken all the preceding steps.

In the second place, we should be prepared temperamentally. Not every one who enters the medical profession is endowed with that sympathy, that gentleness, that kindness, that cheerfulness which makes the visit of the doctor the one bright spot in the day for the bed-ridden. Call it personality if you will, we won't quibble over terms. But the unfortunate medicus who appears devoid of temperament makes his pathway needlessly hard for himself. The great redeeming feature of temperament is that it is not patented; nobody has a monopoly on it, and it *can* be acquired. Temperament, as found on the operative stage and with other artists, is hardly the type we should acquire, for to place credence in our public prints this brand leads to professional discord (and martial infelicities). And yet medicine is an art as well as a science: the treatment is the art, the diagnosis is the science. A purely scientific temperament makes a man a mere machine, and a cold one at that. Let us prepare ourselves temperamentally rather with that of both the arts and the sciences—prepared to do, prepared to sacrifice, prepared to give, prepared to take: to submerge our egotism and to elevate our altruism.

In the third place, let us be prepared physically. We owe it to the community to have those facilities which conduce to accurate diagnosis and to careful treatment. This applies to the sick room, to the office, and to the hospital. To be prepared in this sense is with some the easiest of all, and with others the hardest of all, for it is largely a question of cost, of financial ability. Many a man feels he needs certain equipment, but the cost is, for a time at least, prohibitive. But such a state of affairs should not obtain in our hospitals; for the office is the individual effort, while the hospital is the collective effort of the profession to provide adequate facilities. The ideal office is still a phantasy; the ideal hospital is still a chimera, but an ideal is something to strive for, and yet not be attained, else it ceases to be an ideal. Nevertheless, the lesson of preparedness applies with as much force to the physical equipment as it does to the mental and psychic.

If, then, we prepare ourselves educationally, temperamentally, and physically, we are approaching the goal we

should have. In other words, let us advance our training, cultivate our personality, and perfect our equipment. We may think we are pretty well prepared, and we may be, but there is always room for improvement. Our profession, than which there is no nobler, should be the leader in preparedness, in all that that term implies.

THE TREATMENT OF FRACTURES

By DR. HAROLD SPRINGER, Wilmington, Del.

For many years it has been a fact that most physicians would rather handle any class of cases than take care of a fracture. This state of affairs was brought about by the difficulty and uncertainty of diagnosis, chiefly, and the too frequent bad results that followed the treatment. Even when based on a diagnosis made as correctly as possible with the means available, the results were too often a constant reproach to the skill of the medical man since they are not like his other errors and mistakes. These are taken care of by a friendly undertaker and hidden under six feet of ground but the crooked arm or leg remains as a constant reminder to the physician and what is worse to the patient and his friends, that the treatment of fractures is not one of the things that medical and surgical science can speak of as satisfactory. The unpleasant criticism that the doctor gets is, however, more or less just, although, not always, and unfortunately the doctor is not as innocent as he might be in the matter.

Times have changed since the discovery of the Roentgen-Ray and its application to the diagnosis of fracture and there is now no excuse for the failure to make the correct diagnosis and thus apply the correct treatment. This not only is of advantage to the patient but it gives the doctor the opportunity to protect himself by having available a record that will show just what his diagnosis is and the treatment will speak for itself. This contribution of the X-Ray to the more accurate interpretation of the physical signs, the more general employment of anaesthesia in examination, and the initial treatment of fractures, especially those near joints has made their treatment more intelligent. It has also suggested more simple and direct methods of treatment. Antisepsis has opened to operative surgery a very profitable field and the final results of all the developments and the

open treatment of fractures serves to emphasize more pointedly the fact that the X-Ray, anaesthesia, and antisepsis have made possible good results in the large percentage of fractures. Instead of the bugbear these cases were formerly they have now become a mechanical problem, the solution of which requires the knowledge of the anatomy of the part affected, a few simple mechanical principles and a good share of common sense. We depended upon Providence to not only heal these cases in the past but we expected nature to correct the bad results caused by our bungling efforts. I am sure that the average fracture in a child for instance, would heal up in good position if left alone, and almost believe that a good result will follow in most instances no matter how it is dressed. This is not due to the doctor's skill but to the special Providence that watches over these little ones. If these remarks were not true, nine out of ten children with fractures would now be carrying deformities around with them. You will all agree that you have been surprised many times at the excellent results that have followed some very bad fractures. It is not advisable to trust this method and do nothing but that is far better than to do too much. Many bad results are due to the too blind following of some teaching, while in the medical school. Every fracture is a law unto itself and should be dressed in the position that best holds the broken fragments in their proper place regardless of what fashion decrees as the correct dressing. Too great emphasis can not be laid upon the necessity for frequent and repeated inspections of a fracture after it has been apparently reduced. Too commonly the condition of the part is taken for granted with often distressing and disastrous results.

At the same time meddlesome treatment is equally as dangerous.

This leads me to call your attention to the necessity of avoiding too firm a fixation of the limb in dressing fractures of the shaft of long bones; no matter whether fixed by very rigid immobilization such as a plaster cast, wiring or nailing or a bone plate, for such absolute fixation lacks the necessary stimulation at the broken ends to produce active osteogenesis in them. A failure of union results. This, I believe, is one of the reasons why the open operation plays such an important part in the production of the present great frequency of post operative non-union. We all hear nowadays, of more reunited fractures than we did several years ago, and I believe that this is due to the better mechanical methods of fixation that are non-operative as well as to the open methods. In Germany the reports would seem to show less than we have in this country, and perhaps this may be due

to the German preference for the ambulatory forms of treatment.

In the management of fractures near, or in joints, complete immobilization is absolutely necessary and forced painful passive motion should not be resorted to before the end of the fourth or fifth week. This is just the opposite of the teaching of a few years ago when motion was started at the end of the first week. Just imagine a fracture of a long bone and that at the end of the fifth or sixth day you begin pulling apart the broken ends. What would result? A large mass of callous. The condition might finally heal, but this enormous mass of bony tissue would cause a mechanical fixation. This is the technic of ankylosis. Arthroplasty or some other open operation would then be the only remedy. If on the other hand the parts are kept perfectly quiet until repair takes place and then motion slowly and gradually commenced, a movable joint will result.

My experience leads me to believe that the routine treatment of all fractures by the open operative method as advocated by Sir Arbuthnot Lane of London, would be a grave error. For apart from the fact that the results of operation are often no better, frequently not as good as the non-operative, the danger of sepsis in spite of good technic and the best of care is too grave to be lightly considered. Operation should only be resorted to after conservative measures have been tried and failed and then not by the inexperienced, since a good aseptic technic is the "sine qua non." It is essential for instance, that the bones be handled with instruments and not even the gloved hands since there is no tissue in the body so easily infected. This is one of the reasons why no case should be operated upon for at least ten days after the receipt of the injury, and three or four weeks is not too late. The use of Lane's plates has not proven satisfactory in my hands, and I am gratified to note that this is the experience of a number of men with whom I have talked recently. They act as a foreign body and are a constant source of irritation to the tissues as well as producing a too rigid fixation of the parts. In a total of 32 cases plated by me, eleven only could be called satisfactory. Of this number it was necessary to remove the plate in all the cases but two, and I daresay they will have to be removed in time. One has been in three years and the other eighteen months.

There are certain fractures which in my opinion can be treated in no other way than by some form of operation. The patella, the olecranon and the capitellum. There are some others that might be included in this list but not as a routine procedure. The old way of dressing fractures of the olecranon resulted nine times out of ten in a bad result,

whether the arm was dressed out straight or flexed. The only way to get a good result is to nail it. A fractured patella always results satisfactorily if sutured with catgut or less preferably with wire.

Compound fractures are best left entirely alone. Don't wash, don't probe, don't pack. Just flush thoroughly with Tr. Iodine and put a sterile dressing on. When the skin wound has healed up then it will be time enough to attend to the fracture itself.

(Remarks delivered by Dr. Harold L. Springer, Wilmington, during his lantern demonstration of his paper.)

These plates were taken by Dr. Cleaver of the Delaware Hospital. He insists that we show this plate which shows a fracture of everyone of the carpal bones and the base of the metacarpal bone. This is another one that I had several years ago. A fracture of the head of the radius. This was treated in the position you see it and the result was good, much to my surprise. Now then, we have a fracture, you can plainly see, of the surgical neck of the humerus. This is a patient who had a displacement. We finally did the open operation there, and removed the head of the bone, and the man had a very fine functional result. This wrist we put in, this had a fracture of the styloid parts of the ulna. We got a very good result. Here you see the same thing. There is also a little part of the radius broken off here. We dressed as ordinary Colles fracture. This particular plate I want to call your attention to, especially, because there are three plates which are very interesting. You will notice right here a fracture of the adult and is really an epiphyseal separation. The patient made a great deal of fuss. The only thing we had to go on was the pain. No deformity and no discoloration. As soon as the arm was put at rest the pain disappeared. Here is a fracture of the external condyle. It is a boy, the epiphysis is not united and he fell off a hay wagon and had a great deal of deformity. I could not move the joint until we gave him ether. He has been only six weeks and the boy had a fine functional result. Here is a fracture of the external condyle. We were not able to follow to get final functional result. Here is a compound fracture of bony tissue. It was a compound fracture and the man had a terrible looking hand and he had a fairly good hand finally, but not as good as we would like to see it. Here is another fracture and here is another of epiphyseal fracture. They are both of the same man. He fell and had a broken rib, etc. He had this very obviously in the other wrist. He went to the x-ray man with a note asking for pictures of both wrists, but he told the x-ray man to take only one as he was sure the other bone was broken. He

came back and we sent him for a picture of the other wrist and he had a Colles fracture. He just complained of a little soreness and while after three days, I saw it, there was very little tenderness and discoloration; an x-ray showed he had a very much evident injury than the other side which we were sure of. It shows the difficulty of diagnosing without the aid of x-ray. Another of epiphyseal separation. This was also of an adult, no deformity, no symptoms excepting great pain. Some person who sent him in with this leg. This is one of the cases in which a great deal of swelling and discoloration existed and we put this man up in a tight splint. He would have been sure to have lost his leg and we put it up with lead water and laudanum and put in a fracture box, and we thought after the inflammation and swelling subsided we would operate. We never got a chance. After four weeks the man had as good a leg as anyone would want. It does not always pay to operate in too big a hurry. This picture and the next one belong to the same man. There was a fracture of the upper end of the fibula. There was no deformity. It was only by taking a plate that we were able to discover that he had a fracture. This is a femur and we put it in a box, an unusual fracture of the intra-articular splint of the tibia. This shows the importance of taking pictures in two pictures. If we had allowed the man to go along he might have had a stiff joint. We felt that rest was the most important thing. Here was a comminuted fracture, also compound. The man was placed in as comfortable a position as possible and painted with iodine and dressing put on, and he made a good recovery without infection. This case there are two pictures; this man was injured at the powder works by being run over by an automobile and he came into the hospital with all his pain referred about his lower dorsal vertebra. We concluded he might have some injury and had an x-ray, and could find no injury, and the pain rapidly subsided. When he got up he felt something move in his hip. This is what we found. The fractured sacrum. The next plate shows the same thing though not quite so well. We put him back to bed and strapped him by his pelvis and he is getting along first rate. Here is a picture of the same thing. We put in to show fracture of the internal and external malleoli, and the man had a fairly good result. We coaxed him to let us operate on him. We could feel very distinctly and it seemed so much out of position, and I felt it would be a very simple thing to nail and put in perfectly good condition. He refused and so we had to let him go. He got a fairly good result. This is a picture of the os calcis. This man had been treated for a contusion. He had injured himself jumping off a

train and his heel stayed sore and stayed sore until we had an x-ray taken about three weeks after his injury and it showed fracture. Here is a fracture of the olecranon nailed. This has a Lane plate in it. The man still has a callus and while able to use it, if he bumps it, it hurts him. I think the plate should come out. Here is a fracture of the clavicle in a woman. It stuck up and was very sharp and was gradually working its way through the skin, and we operated on it and took the broken piece out and sewed the other two together with catgut and she got a very good result. We had a case almost identical and sewed with catgut and the patient went home, and a week afterward turned up with bad deformity and had been on a spree and came back with fracture about as bad as originally. Here is a fracture of the anatomical neck of the humerus. You can see here the whole head of the bone, almost the whole surgical neck of the humerus. We could not do anything with that man. He fell off a ladder 40 feet. He did not injure himself at any place except this one arm. He broke the whole lower end of the humerus, having here the remains of the external condyle. Here is an injury he had to his wrist. We had to allow him five weeks before operating. He had the most enormous swelling. Finally most of the swelling went away and we took the head of the humerus out and a big piece at his elbow, and the external condyle and came down to take this piece out and found that the whole thing had become solid. We allowed it to remain there four weeks after the operation. He left the hospital. He had about 75% of motion and his elbow is doing very well. What his ultimate result will be I cannot say. This is a case I showed because of the interesting history. This woman had an abortion performed, followed by infection. Four or five weeks after she recovered from the abortion she noted pain in the radius and an x-ray showed this condition. She thought perhaps she had some injury. The x-ray showed osteoperiostitis. We operated and found she had this condition in dark line and did not seem specific and we referred her to Philadelphia, and she was not quite satisfied with that. She went to the big hospitals and got into the hands of the internes and they said right away after examining her blood that she had syphilis, that the Wassermann was positive. Her family physician and myself have some knowledge of her and we hardly think it possible and the Wassermann of the husband is negative and at any rate she has been through the mill since. That is supposed to be a syphilitic osteoperiostitis of the bone. This is a picture of a man who has pus infection following some injury to the bone and a pathological fracture from some ordinary pyogenic infection. This is

another one of the capitulum fractures; this child had an injury, the x-ray showed to be a capitulum. For some reason the interne treated it by acute extension. The child came back sometime afterward and she had absolutely no movement. She could not move it a quarter of an inch. It showed this big mass of callus of the caputellum which we thought was the chief cause of the ankylosis. The olecranon seemed to be giving her no trouble and we sewed a flap of tissue in there and did an arthroplasty after Murphy's method. Five weeks after operation she seemed to have good motion in her elbow-joint. Whether it will stay that way I do not know. This picture is that of a boy who has now a good arm, although unable to extend it completely yet on account of the contraction of the capsular ligament.

Before closing I would direct your attention to a common belief on the part of patients and most physicians, namely a fracture must be reduced and immobilized as soon as possible after the injury. This is not only incorrect but such treatment is the cause of many disastrous results that follow. There is no hurry in treating a fracture unless it be compound and the sooner we get away from this idea the sooner such conditions as Volkman's contracture, disturbance or loss of nerve functions with their co-incident excruciating pain or muscular atrophy will cease to constantly reproach the physician.

DISCUSSION.

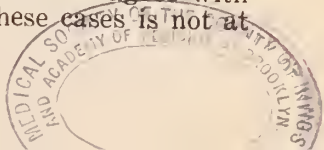
DR. H. A. CLEAVER, Wilmington: I am not going to say very much for two very good reasons. In the first place, I have very little to say, and in the next place, Dr. Springer has covered the ground so thoroughly. From the standpoint of the Roentgenologist is to be discussed whether there is a fracture present. It is astonishing what mistakes can be made with anything apparently so simple as a fracture, which is not so simple at all. Some of the plates Dr. Springer put in show that: One was sent in as a Colles fracture; one as a sprained wrist; one with an uncertain diagnosis. The uncertain diagnosis had the greatest amount of symptoms. The Colles fracture and the sprained wrist had about equal. I happen to know which was sprained wrist and which the Colles fracture. They are both Colles fractures. That applies to hip-joint. Dr. Springer brought that out in his talk. I have a vivid recollection of the man in the Delaware Hospital with his arm fractured. He had free motion. He had a bad break in the surgical neck of the humerus. I know of another case we do not have here. There was deformity and yet the x-ray plate showed absolutely no fracture. I am emphasizing this because in injury to the hip-joint or

shoulder-joint they absolutely should not be diagnosed without an x-ray plate. A man is taking too big a chance not only for his own reputation, but for his patient's sake. In the case of a fracture of the intraarticular of the knee-joint, a grave fault is to take but one picture of the knee-joint. If the case Dr. Springer showed had been examined only in one direction, the lateral position, most certainly he would have shown no fracture. There was unquestionably a break at the wrist. This is very simple but reasonable because the fragments overlap each other. One more point, the gravity of the condition, what operation should be done and why, that is best illustrated by epiphyseal separations of capitellus in young chickens. I remember two cases where the joint was immovable, but just what are you going to do? I understand in the old days the surgeon would have gone down and made an open wound. There was that man with a total fracture of the whole upper end of the humerus thrown off and bent up. It was an atrocious fracture, but what are you going to do with it? In the young man with fracture of the capitellum—I am not saying that to boost the x-ray, but simply as a matter of precaution—I think any surgeon will endorse what I say that in any joints the diagnosis is absolutely incomplete without the Roentgenologist's work.

The president introduced Dr. William L. Rodman, Philadelphia, president of the American Medical Association, and invited him to participate in the discussion.

DR. WILLIAM L. RODMAN, Philadelphia: I cannot tell you how pleased I was to hear the paper by Dr. Springer and I absolutely agree with him in every one of his conclusions. I think his paper is safe, sound surgery. In the first place, I am entirely in accord with Dr. Springer and Dr. Cleaver that no one at this time is justified in treating the fracture, particularly about the joints, the elbow-joint more particularly than any other, without an accurate diagnosis having been made by means of the x-ray. Now we know that law suits are very apt to follow fractures that are treated and then for moral reasons we want every support possible and in addition to the valuable aid given by the x-ray one is putting oneself in a position where he cannot be criticized if he has called to his aid so valuable an agent as the x-ray. Now, I am thoroughly in accord with Dr. Springer's position as to the frequency with which the Lane plate shall be used. I do not think there is any doubt but that under the forceful leadership of Lane that at the present time, it is being used by men who ought not to do them. In other words, an operation for ununited fracture should not in my judgment be done by the occasional oper-

ator. As Dr. Springer has said, it is a serious thing to put a foreign body in the tissue and it must be done with the most absolute care and with the most conscientious detail so far as surgical technic if a foreign body is to remain there indefinitely or long enough to secure union between these fragments. I am just as loath as he to introduce a foreign body at all. The operation where the osteogenetic plate is put in, will prove preferable in time. I feel that it is a step in the right direction because we avoid taking out a plate which is so often the case. My experience has been the same as Dr. Springer's where we introduce the metallic foreign body. Another point I would more strongly emphasize than did Dr. Springer, that is the use of antiseptic. It is all very well to use the x-ray, it is all very well to use the Lane plate in the exceptional cases, but what we are concerned with is what shall we do in the average cases? I think of all of the good points made by the essayist in his paper was the use of an anaesthetic in practically all cases. I should say practically all. Particularly should an anaesthetic be used in the case of a fracture in a child. It is almost impossible to make an accurate diagnosis without an anaesthetic and it is almost impossible to secure an accurate coaptation of the fragments. I believe here is where not only the practitioner, but the surgeon fails to do his full duty by the patient. If an anaesthetic is used we all know that the irritation of the fragments causes spasmodic contraction of the muscles. In other words, you have spasm of the muscle to overcome unless you relax the muscle not only by primary but by full anaesthesia and I insist that is the most valuable lesson we get from the paper. Another excellent point that I have heard my friend, Murphy, of Chicago, make so often, that is in our efforts to secure absolute immobility of the fragments we sometimes are responsible for ununited fracture. Particularly is that the case in the humerus and femur and in bones where we know that non-union or delayed union so frequently occur. In other words, a certain amount of motion at the seat of fracture is not undesirable in some instances and that is why the essayist emphasizes the German ambulatory treatment resulting in delayed union. There is no doubt that the surgeon in securing too great immobility and too early immobility is responsible for a few, at least, of delayed union or non-union. I agree with the essayist in his position that fractures of the patella almost always call for operation. Of course the exceptional case will get well with the minimum amount of fibrous union without surgical intervention, but it is the exceptional not the average case and I agree with him again that the time to operate on these cases is not at



the time of fracture. It is about ten days later when all acute resentment of the joint has subsided. I remember I was in the office recently in Chicago with my friend, Dr. Wylyss Andrews. His house surgeon telephoned him that he had in his wards a fractured patella and wanted to know from Dr. Andrews what he should do. He told him to wait ten days or a month, then flush out the joint and use non-absorbable or the absorbable suture. I had very great pleasure in listening to this paper and wish to congratulate the essayist on his excellent work and the sound teaching that he has given us.

DR. GEORGE I. MCKELWAY, Dover: I would like to have Dr. Rodman say something about the transplanting of bone by the Albee method.

DR W. L. RODMAN, Philadelphia: I have had a very pleasant and profitable acquaintance with Dr. Albee and have seen him operate and the day after he gave the Muller lecture at the College of Physicians in Philadelphia, he was kind enough to hold my clinic at the Medico-Chirurgical where he operated on a young man who had been twice operated on by a surgeon in Philadelphia, without securing good results. Unfortunately, the doctor operated in the presence of an open wound, a wound which to say the least was potentially septic and although the operation was beautifully done and the graft was taken from the same side and introduced between the proximal and distal fragments the wound became septic from the beginning and I cannot say what the result is going to be, although now practically ten months have elapsed. The principle of the operation, to answer Dr. McKelway's question, how often will the autogenous graft and undergo necrosis, in this particular instance which I have recorded there has been necrosis of part of the graft. It has been thrown off and yet part of it remained. The young man was at the hospital yesterday, just having returned, I did not take time to examine him carefully. I asked him to return to me tomorrow for a more thorough examination. He is under the impression that union has taken place, that the portion of the graft not extruded was capable of bringing about enough reaction of osteogenetic cells. I am giving you his statement for that and shall not be able to say until a careful examination has been made. But, I have seen other cases of the kind and can well understand why this case has not done as well as the others. From Dr. Albee's statements and from what he has written, I am safe in making the statement that infrequently does the graft die and nearly always is the result, all that one could wish. Indeed in giving us this osteoplastic flap Dr. Albee has contributed one of the greatest

advances of real surgical principles, one of the milestones in surgery, so that all of us will be bound to admit that if we were called upon to mention twenty-five of the greatest principles which had been added to surgery in the last ten years, we might differ in the way in which we would write them down, but I think everyone would agree that Albee's osteoplastic, it must be done conscientiously, it must be done skilfully; it requires somewhat expensive apparatus, but his technic as planned, conscientiously carried out by the capable surgeon, will, I think, secure the very best results. It will in time displace Lane's plates and all non-absorbable substances which is the very nature of things, must cause irritation so that a majority of them have to be taken out later on.

DR. HAROLD L. SPRINGER, Wilmington: In closing I meant to emphasize two or three cases there. They were fractures of the scapula and the wrist. They were interesting from the fact that they were sent in as sprains of the wrist and they did not get better and finally as a last resort they were x-rayed and showed fracture of the scaphoid bone of the wrist, which when put up the pain subsided and the condition did very well. I wish to thank Dr. Rodman for speaking of my paper in such a flattering way and it is particularly gratifying because it comes from such an experienced authority as Dr. Rodman.

AMALGAMATION OF LEADING PHILADELPHIA MEDICAL SCHOOLS.

[In view of the great advance just made in medical education here the Roster has, upon request, obtained the following statement from one of the city's leading teachers and recognized authority.]

The consolidation of the three leading medical schools of Philadelphia marks an epoch in the history of medical education in this city and it will exert a country-wide beneficial effect. The medical profession will speedily recognize in the new organization great possibilities in both undergraduate and graduate teaching. When the amalgamated schools shall have been thoroughly well organized, undergraduate training will be unified and, for the most part, be placed on a university basis, where it properly belongs. On this common, higher level the students will be privileged to choose between teachers of recognized popularity and ability, since the combined faculties of the two oldest schools will be subdivided into groups with respect to each subject embraced by the curriculum.

This greatest, well-conceived and well-appointed medi-

cal school of our day and generation will be under the control of three trustees from the University of Pennsylvania and three trustees from Jefferson Medical College. By the sustained interest, on which we may depend, of the men who at the expense of much thought and conspicuous devotion to the cause of medical education have wisely planned this union of institutions, a decisive step will be made and maintained.

The simultaneous merging of the Medico-Chirurgical College with the University of Pennsylvania must be looked upon as an event of supreme and far-reaching importance. The former institution is to become the graduate school of medicine in the University, and is to be substantially endowed. It will, therefore, be in a position to develop and maintain graduate instruction in all departments of practical medicine on a high plane and it will, additionally, offer ample opportunity for carrying on research work.

In recognition of the fact that it is unsafe and unscientific to attempt to interpret disease from the clinical side alone, it is proposed to provide chairs of Biologic Chemistry, Roentgenology, Pathology and Bacteriology, with adequate facilities for the work of each in the new school. Service of the kind contemplated by this department is not only needed at present writing, when the doors of the foreign universities are closed to ambitious American practitioners looking for help, but is at all times of the highest importance to the medical profession.

The fruits of this large teaching institution, making ample provision for both undergraduate and graduate training, will doubtless prove its superior advantages in the near future. To achieve the end in view, it is essential to develop and maintain an efficient organization and, more importantly still, for those directly connected with these departments to strive to keep alive a co-operative and harmonious spirit over all. It is earnestly hoped that other detached institutions will join in the movement for a Greater Medical Philadelphia and finally the scenes enacted here may, through their inspirational influence, lead to similar accomplishments elsewhere throughout the land.

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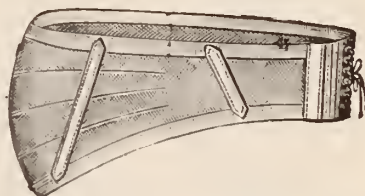
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* New York Medical Journal, July 4, 1914.

† New Orleans Medical and Surgical Journal, August, 1914; Dental Cosmos, December, 1914.

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907 Delaware Ave.
Wilmington, Del.

Business Manager

DR. J. W. BASTIAN

915 Washington Street
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With this number the Journal reaches its subscribers from the hands of its new editor. He approaches his task with fear and trembling, for nobody is better acquainted with his literary deficiencies than he himself; nobody is newer to the profession in Delaware than he; nobody knows less about what would interest and inspire the profession here than he. And so, ye editor truly feels sorry for the Journal, for he sincerely desires to see it prosper—to see it become something bigger and better. This it ought to be, and furthermore, it *can* be, but *only* with the active co-operation of the profession of the State. By this is meant not an individual here and another there, but everybody. What the editor will need is not a sporadic helping hand, but an epidemic of them. He will be grateful for assistance of any and all kinds; small contributions will be thankfully received; large ones in proportion.

Naturally being still somewhat out of breath from surprise at his election, the editor has as yet formulated no editorial policy. Of course he'll simply have to have a policy or else he wouldn't be a real, live editor. However, the season just now being uncomfortably wet and warm, he proposes to defer this arduous task of building up a policy; maybe some

of his kind friends will "wish" one on to him. Still, even at this stage it may be well to say that the only policy to be pursued will be one that, so far as the editor can determine, will make this journal more profitable, more interesting, more entertaining than it has been. This is by no means a small thing to do, especially when one considers that the entire circulation—to the profession, to subscriber, to advertisers and to exchanges—is still rather small with little or no prospect of it soon becoming much larger. Another thing to be accomplished is to make it self-supporting, for the Journal is not now and never has been paying the mechanical cost of printing and mailing. This means new advertising, which we hope to secure by enlarging our circulation and by issuing the numbers promptly month for month. We are back now several numbers, but we plan to catch up by the end of September. This done we shall then be in readiness to expand the Journal till it becomes the thing we so earnestly desire—something bigger and better.

In the meantime please send in anything and everything suitable for such a journal, such as original papers, especially those read at meetings of the county societies, personal news of the profession, diagnostic and therapeutic notes and observations, editorials on timely subjects, queries, etc., hospital news items, medical reprints and all other material applicable to the purpose. This sort of co-operation, of a pan-editorship, ought to bring results.

Finally, till we can strike our pace, as it were, we ask your indulgence and tolerance—maybe it won't be so bad after all. So now let's all get together.

UTERINE FIBROIDS*

By HENRY J. STUBBS, M. D., Wilmington, Del.

These growths are the most common of all uterine neoplasms. They usually develop during the menstrual period of the woman; rarely before menstruation or after its cessation. The impression that they are more common in the negro race seems to be disproved by the investigations of Kelly and Williams.

Heredity seems to be a factor. The tumor or tumors are circumscribed, sharply defined, multiple or single, of slow growth, varying in size very greatly, as well as in con-

stitutional influence on the patient. These conditions are controlled by the situation of the growth, which is surrounded by a firm capsule from which the myoma is usually readily shelled out. The tumor is nurtured by blood vessels leading from the capsule into the muscular fibers of the tumor, hence the character of the fibroid decides largely the rapidity of its growth—a hard, dense growth being less freely supplied with blood and a softer one more freely nourished.

Nothing is known of the cause of the development of such growths, aside from the fact that they originate in the nyoblast, or muscle-forming cell.

Myoma are liable to various secondary degenerations, such as fatty, cystic, mucoid, calcification, septic infection and malignant changes.

The septic infection is greatly dreaded. This condition may be brought about by the improper use of the uterine sound, especially if it and the parts are not rendered sterile. Any violent bruise or knock, extension of infection from adherent intestine or bladder, especially if electrolysis is used. A tumor may for years lie surgically inoffensive; suddenly the patient will run a septic temperature, high pulse and have great pain. I must say the cause of such infection is often very obscure; when it does occur a very grave condition of things exists.

Malignant degeneration includes the carcinomas and sarcomas of the uterus, which is such a large field that I will not consider it in detail here. The liability of these changes taking place in uterine fibroids makes them dangerous; hence they should be removed early, as a rule.

Fibroids may be located in any part of the uterus; in the majority of cases they are in the body of the organ. They are interstitial, submucus, subperitoneal and cervical. The symptoms are hemorrhage—not sudden or profuse—pressure and pulling, producing various disturbances, such as hemorrhage, constipation, rectal and vesical tenesmus, frequent urination or retention of urine, caused by the pressure of the growth on the bladder.

In connection with this brief description of fibroids I will give a statement of thirty-three cases I have operated on recently in the Delaware Hospital. I had twenty-eight recoveries and five deaths; one death was from infection following child birth—always a dangerous complication—undertaken as a life-saving measure with very slight chance of saving the patient from the beginning.

One case of right salpingitis; both ovaries cystic, fibroid infected.

One case of procidentia of the uterus with fibroid—this case should have recovered.

One case of uterine fibroid with right salpingitis; tumor probably infected from existing inflammation of the tube before operation or general infection at the time of operation.

Among interesting recoveries was a case of intra-ligamentous fibroid. The operation was undertaken in one of the largest hospitals in Philadelphia. Exploratory incision, wound closed, pronounced inoperable. Came under my care some months after patient had a large fixed tumor. Patient was very weak and exsanguinated—evidently could not live long. With full consent and knowledge of the dangers the patient and family asked for operation. Fortunately, when I operated I found a point of cleavage and was able to remove the mass. Patient made a full recovery. This may have been one of the cases where "Angels fear to tread," etc.

Another case was one of sixteen years' duration. Most of that time the patient was in bed, with moderate to free flowing. When she came to the hospital I did not dare to operate for two weeks, owing to the increased hemorrhage caused by bringing her some fifteen miles by auto, taking two weeks to build her up as well as possible. I might say that her last family physician tried for some months to induce her to have an operation, when she finally said she would not go unless it was the last resort—and she nearly made it so. However, I finally operated and she made a full recovery, though convalescence was very slow. This was pan-hysterectomy.

Three cases, carcinoma of the fibroid in the body of the uterus. As long as I was able to keep track of these cases they were living; what the later results were I cannot say.

Fifteen cases were operated on for pressure of some of the pelvic organs, or hemorrhage—all recovered.

Two were for fibroid, complicating pregnancy. Both recovered, completing terms of pregnancy—normal delivery. These fibroids were subperitoneal, operation myomectomy.

The operations performed were pan-hysterectomy, which is the operation of choice in suppurating growths, infection or malignancy.

Supra-vaginal operation is preferable over total removal of the organ, except as stated in pan-hysterectomy, for the reason that mortality is lowered, the operation more quickly performed, danger of infection lessened, hemorrhage more easily controlled and vaginal canal remains the same.

Vaginal hysterectomy, when uterus is prolapsed with small fibroid.

Myomectomy for subperitoneal fibroids. Selecting the operation which, in my judgment, best suited each case.

X-ray treatment for fibroma of the uterus is being used

in the Freiberg clinic by Kroenig and Gauss, using hard rays filtered, using the cross-fire method. They claim that every case of fibroid is curable in five weeks, but advise operation if enucleation is possible without causing sterility, or when there is a probable cancerous degeneration.

Radium is also having its day.

While I had five deaths in this number of operations, I feel my percentage is very good, when we consider I had four deaths from infected tumors, three before operation.

While these growths may exist for years, causing very slight disturbances to the woman, would it not be conservative surgery to remove them early, knowing they may, at any time, become infected, suppurate or take on malignancy? When such changes do occur a comparatively safe operation becomes a very dangerous one.

Since writing this article I have, during the past ten days, operated four times for fibroid of the uterus, three supravaginal hysterectomies. One of these was for a badly prolapsed uterus with a loose flabby perineum. Fibroid in fundus of uterus. I made a high amputation of the organ, then did a ventral fixation of the uterus. So far as I know, this is original. The patient is making a fine recovery. Uterus seems to be well up and fixed; now ten days after operation. I did this knowing how often we have prolapse of the parts after the customary operation.

The last case, October 1, was for cervical fibroid, pedunculated; pedicle tied—tumor removed. Making 37 cases.

I wish to acknowledge the kindness of Dr. Barsky for making a list of these cases from the files of the Delaware Hospital.

References: Dudley, Tonsey, Reed, Ashton, Kelly.

*Read before the Delaware State Medical Society, October, 1915.

GIANT RENAL CALCULUS*

By JAMES A. DRAPER, M. D., Wilmington, Del.

Wilmington, Del., Oct. 11, 1915.

The President asked me to read a paper at this meeting of the State Medical Society, but I thought I would report this case which I had in the ward of the Delaware Hospital about a year ago.

*Read before the Delaware State Medical Society, October, 1915.

The patient was a man, age 28, single and a coachman by occupation. His family and personal history were negative and his illness really dated from childhood.

He stated that ever since he could remember he had been subject to attacks in which he would suffer severe pain in the left loin extending into the bladder. During these attacks the left side of the abdomen would swell and he would only pass a small quantity of urine which was perfectly clear. The attacks would last from a few hours to a day and would be quickly relieved by passing a large quantity of very thick, offensive urine. They occurred on an average about once a month until he was fifteen years of age, after that they were less frequent.

When he was eleven years old he was operated on at the University Hospital for a stone in the bladder. The operation was a litholapaxy. Previous to this operation he had suffered daily for a month with pain in the bladder, sudden stoppage of urine and pain in the left side, which would be relieved by a hot bath which would relax him and help him to pass his urine. After the operation he had relief for six months with the exception of slight attacks, but he still continued to pass thick, offensive urine. At the end of this time the attacks began to recur and he has passed several small calculi since.

In February, 1911, he had an attack lasting six weeks, in which he had this pain and stoppage of urine almost every day, but had very few attacks after that until February, 1914, when he had another attack lasting about twenty-four hours and he has been suffering ever since.

He first came to see me on May 5, 1914, complaining of constant pain in his left side extending down the loin; weakness and also of the passage of very offensive urine. He was pale, emaciated and looked like an old man. The left side of the abdomen was decidedly larger than the right; the enlargement extending from the costal margin to the crest of the ilium and it seemed to be limited by the midline. He was also quite tender over this area. His urine was thick and very offensive and contained a large amount of pus and also calcium oxalate and red blood cells.

The enlargement of the left side of his abdomen suggested the possibility of a tumor of the kidney but the history and urinalysis made me feel suspicious of a stone and I sent him to Dr. Cleaver to be x-rayed.

Dr. Cleaver called me up some time after and stated that he thought we had a case of immense Renalcalculi. The plate that he took was excellent, but the stones seemed so large that I was very skeptical about the matter and suggested that the shadows might be caused by faecal accumu-

lations. He cleared the man's bowels out thoroughly and x-rayed him again with the same results, and we both then decided that it must be a case of giant calculi.

He was admitted to the hospital on May 16, his temperature at that time ranging from 99 2-5 to 102 2-5.

With the assistance of Dr. Wertenbaker and the resident I operated on him on May 20. The usual lumbar incision was made. The kidney was very much enlarged and adherent and was removed with considerable difficulty. The man reacted well from his operation and was able to leave the hospital on July 28. He came in to see me several times afterwards and appeared to be doing fairly well but I was called out to see him a few weeks later and found that he had become very oedematous and weak and his general condition was very bad. He was evidently suffering from an ascending infection of his other kidney. I sent him back to the hospital but he did not improve and finally died about three weeks later.

The stones that I have here are the largest real calculi that I have ever seen, although much larger ones have been reported. The largest weighs $3\frac{1}{2}$ ounces; the next weighs 21 1-6 drams; the next 5 1-3 drams, and others progressively less. The total weight of the stones amounted to one pound $2\frac{1}{2}$ drams. Two were lost which would make the weight a little more.

It is very unusual to see cases of this sort nowadays as they are usually diagnosed very much earlier, before the stones reach this size and I am reporting the case to the Society purely as a matter of interest.

Miscellaneous

PRINCIPAL CAUSES OF DEATH.

CENSUS BUREAU'S SUMMARY OF THE STATISTICS FOR THE REGISTRATION AREA IN 1914.

According to a preliminary announcement with reference to mortality in 1914, issued by Director Sam. L. Rogers, of the Bureau of the Census, Department of Commerce, and compiled by Mr. Richard C. Lappin, chief statistician for vital statistics, more than 30 per cent of the 898,059 deaths reported for that year in the "registration area," which contained about two-thirds of the population of the entire United

States, were due to three causes—heart disease, tuberculosis, and pneumonia—and more than 60 per cent. to eleven causes—the three just named, together with Bright's disease and nephritis, cancer, diarrhea and enteritis, apoplexy, arterial diseases, diphtheria, diabetes, and typhoid fever.

The deaths from heart diseases (organic diseases of the heart and endocarditis) in the registration area in 1914 numbered 99,534, or 150.3 per 100,000 population. The death or mortality rate from this cause shows a marked increase as compared with 1900, when it was only 123.1 per 100,000.

Tuberculosis in its various forms claimed 96,903 victims in 1914, of which number 84,366 died from tuberculosis of the lungs (including acute miliary tuberculosis). As a result of a more general understanding of the laws of health, the importance of fresh air, etc., due in part, no doubt, to the efforts of the various societies for the prevention of tuberculosis, there has been a most marked and gratifying decrease during recent years in the mortality from this scourge of civilization. In only a decade—from 1904 to 1914—the death rate from tuberculosis in all its forms fell from 200.7 to 146.8 per 100,000, the decline being continuous from year to year. This is a drop of more than 25 per cent. Prior to 1904 the rate had fluctuated, starting at 201.9 in 1900. Even yet, however, tuberculosis has the gruesome distinction of causing more deaths annually than any other form of bodily illness except heart diseases, and over 40 per cent. more than all external causes—accidents, homicides, and suicides combined.

Pneumonia (including bronchopneumonia) was responsible for 83,804 deaths in the registration area in 1914, or 127 per 100,000—the lowest rate on record. The mortality rate from this disease, like that from tuberculosis, has shown a marked decline since 1900, when it was 180.5 per 100,000. Its fluctuations from year to year, however, have been pronounced, whereas the decline in the rate for tuberculosis has been nearly continuous.

The only remaining death rate higher than 100 per 100,000 in 1914 was that for Bright's disease and acute nephritis, 102.4. The total number of deaths due to these maladies in 1914 was 67,545, more than nine-tenths of which were caused by Bright's disease and the remainder by acute nephritis. The mortality from these two causes increased from 89 per 100,000 in 1900 to 103.4 in 1905, since which year it has fluctuated somewhat.

Next in order of deadliness come cancer and other malignant tumors, which filled 52,420 graves in 1914. Of these deaths, 19,889, or almost 38 per cent. resulted from cancers of the stomach and liver. The death rate from cancer has

risen from 63 per 100,000 in 1900 to 79.4 in 1914. The increase has been almost continuous, there having been but two years—1906 and 1911—which showed a decline as compared with the years immediately preceding. It is possible that at least a part of this indicated increase is due to more accurate diagnosis and greater care on the part of physicians in making reports to registration officials.

Diarrhea and enteritis caused 52,407 deaths in 1914, or 79.4 per 100,000. This rate shows a marked falling off as compared with the rate for the preceding year, 90.2, and a very pronounced decline as compared with that for 1900, which was 133.2. Nearly five-sixths of the total number of deaths charged to these causes in 1914 were of infants under 2 years of age.

Apoplexy was the cause of 51,272 deaths, or 77.7 per 100,000. The rate from this malady has increased gradually, with occasional slight declines, since 1900, when it stood at 67.5.

Arterial diseases of various kinds—atheroma, aneurism, etc.—caused 15,044 deaths, or 22.8 per 100,000, in the registration area.

No epidemic disease produced a death rate as high as 18 per 100,000 in 1914. The fatal cases of diphtheria and croup—which are classed together in the statistics, but practically all of which are of diphtheria—numbered 11,786, or 17.9 per 100,000, in that year, the rate having fallen from 43.3 in 1900. This decline of nearly 59 per cent. is relatively greater than that shown by any other important cause of death. The rate has not fallen continuously, but has fluctuated somewhat from year to year.

Diabetes was the cause of 10,666 deaths, or 16.2 per 100,000. The rate from this disease has risen almost continuously from year to year since 1900, when it was 9.7 per 100,000.

The mortality rate from typhoid fever has shown a most gratifying decline since 1900, having decreased from 35.9 per 100,000 in that year to 15.4 in 1914, or by 57 per cent. This decline has been almost as great, relatively, as that for diphtheria, and has been greater than for any other principal cause of death. The total number of deaths due to typhoid fever in 1914 was 10,185. The marked decrease in the mortality from this disease gives emphatic testimony to the effectiveness of present-day methods, not only of cure but of prevention. The efficacy of improved water supply and sewerage systems, of the campaign against the fly, of other sanitary precautions is strikingly shown by the reduction of the typhoid mortality rate to the extent of more than five-ninths in 14 years.

WHOOPING COUGH, MEASLES, AND SCARLET FEVER.

The principal epidemic maladies of childhood—whooping cough, measles, and scarlet fever—were together responsible for no fewer than 15,617 deaths of both adults and children, or 23.7 per 100,000, in the registration area in 1914, the rates for the three diseases separately being 10.3, 6.8, and 6.6, respectively. In 1913 measles caused a greater mortality than either of the other diseases, but in 1914 whooping cough had first place. In every year since and including 1910, as well as in several preceding years, measles has caused a greater number of deaths than the much more dreaded scarlet fever. The mortality rates for all three of these diseases fluctuate greatly from year to year. The rates for measles and scarlet fever in 1914 were the lowest in 15 years, while that for whooping cough was considerably above the lowest recorded rate for this disease, 6.5 in 1904, although far below the highest, 15.8 in 1903.

RAILWAY AND STREET CAR ACCIDENTS.

Deaths due to railway accidents and injuries totaled 7,062, or 10.7 per 100,000. This number includes fatalities resulting from collisions between railway trains and vehicles at grade crossings. The death rate from railway accidents and injuries is the lowest on record and shows a most marked and gratifying decline as compared with the rate for 1913, which was 13 per 100,000, and a still more pronounced drop from the average for the five-year period 1906-1910, which was 15 per 100,000.

Deaths resulting from street car accidents and injuries numbered 1,673, or 2.5 per 100,000. This rate, like that for railway fatalities, is the lowest on record and shows a material falling off as compared with 1913, when it was 3.2, and as compared with the average for the five-year period 1906-1910, which was 3.7.

SUICIDES.

The number of suicides reported in 1914 was 10,933, or 16.6 per 100,000 population. Of this number 3,286 accomplished self-destruction by the use of firearms, 3,000 by poison, 1,552 by hanging or strangulation, 1,419 by asphyxia, 658 by the use of knives or other cutting or piercing instruments, 619 by drowning, 225 by jumping from high places, 89 by crushing, and 85 by other methods.

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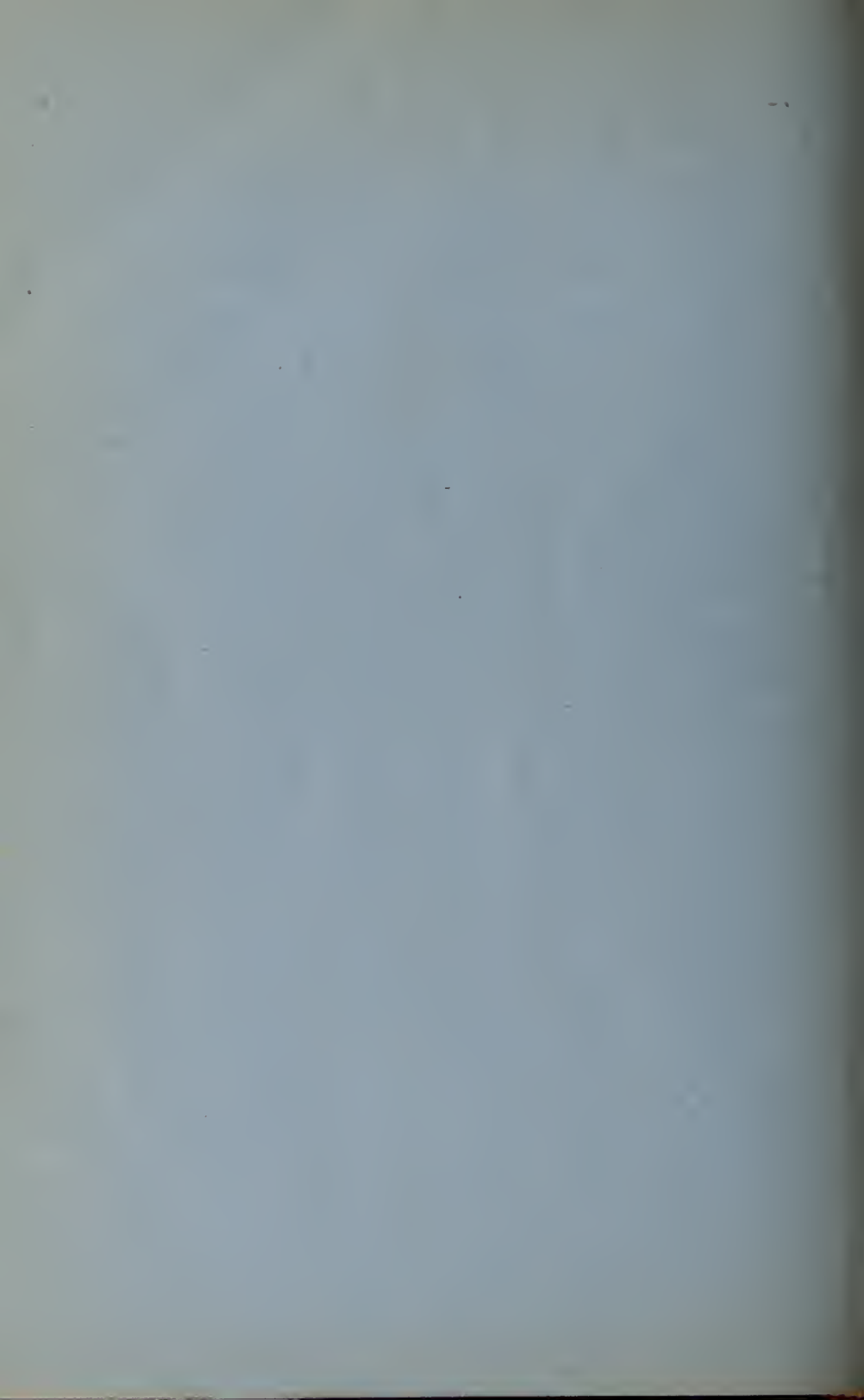
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The Double Shame of Baltimore

By Howard A. Kelly, M.D.

Under Cover of Respectability

By Winthrop D. Lane

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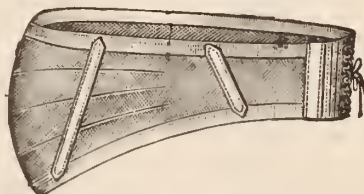
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Full literature mailed upon request.

* British Medical Journal, 1915, 1445; Jour. Royal Army Med. Cor., 1911, XVI; Press Medicale, Feb. 10, XXIV, No. 8, p. 5764; Lancet, Sept. 19, 1914; Jour. A. M. A., June 26, 1915, editorial; Amer. Jour. Med. Science, 1915, CXLIX 406; Jour. A. M. A., August 7, 1915; Jour. A. M. A., July 24, 1915. † Am. Jour. Med. Sci., 1915, CXLIX 406.



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907 Delaware Ave.
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Business Manager

DR. J. W. BASTIAN

915 Washington Street
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AN APPEAL TO PATRIOTISM.—Without waving the flag all over the stage while the chorus yells "three cheers for the grand old U. S. A.," there is a way each of us can show our medical patriotism and still not dodge bullets across the Rio. It's simply this—the Secretary of the State Society is after recruits, able-bodied and otherwise, for the program of the state meeting at Milford, in October. We are informed that so far, *not a single paper* has been volunteered. Now we all know, that to make our annual meeting interesting and profitable requires a number of papers, preferably by our own men. Surely pride alone will prompt some of our genial medicos to take up pen and ink and prepare the sine qua non of our fall meeting. So important a thing as the annual meeting of the State Society cannot be allowed to go by default, so far as papers are concerned. Hence, in order to spare ourselves the humiliation of having *all* our papers read by men from other states, we call attention to the present state of affairs in the hope and expectation that it will be speedily remedied.

SOMETHING TO THINK ABOUT.—This number of the Journal is devoted entirely to a summary, written by an

important writer and published in the Survey of March 25 and May 6, 1916, of the report of the Vice Commission of Baltimore, who after three years of hard work, during which time the most searching investigation ever made of the vice problem in any American municipality was conducted, have made their report to the Governor. The revelations are startling—so much so that, as the Baltimore Sun stated, if the names were correlated with the acts, the whole social fabric of the city would totter. One can scarcely believe that a city of churches (Baltimore has one church for every 1,100 inhabitants) is any worse than the average large American city: To our minds the stunning indictment means simply that the evidence was taken and the indictment prepared more carefully and more thoroughly than ever before. One may fairly assume that while Baltimore is no better than other large centers of population, it is hardly any worse. However, to say that Baltimore is only an average city morally, does not excuse her shortcomings—just because the lady next door is a careless housekeeper is no reason for us to cast the broom and scrubbing brush aside.

The report is exhaustive, as the following summary will indicate, and fills five volumes, with 1,200 pages. That it created a storm of protest is no wonder, for it did not mince its language, gloss over its facts, or minimize its findings. Insofar as the whole subject is one which Wilmington has tackled already, with indifferent success because action has been taken only against the professional prostitute, and because the subject has a medical as well as a social and legal aspect, the articles by Mr. Lane, with Dr. Kelly's introduction, may be read by the profession with interest, and perhaps profit.

The Double Shame of Baltimore

Her Unpublished Vice Report,
Her Indifference

By HOWARD A. KELLY, M. D.

If you consult an honest doctor about your health, he will first of all do his best to find out what is the matter with you, and he will only begin to treat you when he has fully investigated and can name your disease; this is called in medical language—making a diagnosis.

Cities and states, and countries, too, like individuals, have their diseases, acute and chronic; they grow ill, and either die suddenly as in war, or they linger on in growing senile decrepitude, until at last they are buried deep in the dust like Assyria, and Egypt, and old Greece.

Cities and states, therefore, have their diseases which must be diagnosed and treated, but here we are all doctors, and it is the bounden duty of each one of us to contribute his quota in treating the patient, the city and the state.

The most deadly diseases which affect the life of a city, or of a nation, are these: The self-centered lives of the well-to-do, a national insatiable greed for money, gambling, the corrupting saloon, universal disrespect of law, and sexual immorality. All these fatal diseases have run riot for decades in Mexico, and though the land itself is fair and exceedingly rich, the nation lingers on, a doddering corpse, at intervals squawking about "liberty, equality and fraternity," a land in which decency and honor and morality are terms without meaning.

These same deadly moral diseases are also today rapidly invading all parts of our own country, and unless we quickly unite to cut them out, we too, shall soon be no whit better than our effete brethren who inhabit, but have long ceased in any real sense, to live in the great countries to the south of us.

We seem in these United States to have entered a sort of fool's paradise, in which we imagine that the corrupting forces which have broken down other communities will not operate to disintegrate our nation as well.

Here in Baltimore, and elsewhere in Maryland a hall mark of our degradation is to be found in the control of our voters by the corrupt bosses who are constantly consulted by city and by state officials, and who dictate policies and appointments affecting the lives and welfare of all of us.

Vice in low theatrical shows and sex immorality is literally eating the heart out of our city life. And yet never has any city listened to a clearer diagnosis formulated by experts, than that made by our recent Vice Commission, and outlined in abstract in our newspapers last fall. For the first time in her life, Baltimore has gazed into a clear glass and beheld her natural face. The honest composite mind of the Vice Commission told her unflinchingly of her multiplied gross immoralities, of the dreadful resorts of unnatural vice, of the daily assassination of the characters of young women and men, and of the co-operation of low theatres, and the saloons and cabarets; the commission explored the by-products of immorality in the murder of countless infants, consigned in bulk, like dead dogs, to nameless pits; they noted

the connivance in the crime of murder, of nurses, midwives, of doctors and of clergy, all eager to make the criminal's task an easy one.

What shall we say, for example, to public indifference to the following crime which came under my personal notice?

A man in the Eastern district raped seven little girls in petticoats, and his punishment was a month's imprisonment! If his color had been black he would have hung for it. When he got out he returned to board in the home of two of his little victims. Can hell itself show a level of degradation lower than this? Well, I do think that right here in Baltimore there is a deeper level, and that is the smug hypocritical Christianity which sings lustily "Onward Christian Soldiers, Marching as to War," and yet does no fighting for righteousness; the hypocrisy of a religion which I declare saves me, while it leaves me indifferent to the conditions under which thousands of my fellows are living. The world sees the inconsistency, even if we are blind, and despises us for it. Is not this the reason why in the world's vain struggle for reform it never thinks of crying to the church for help?

It is surely mockery to cry "Lord, Lord," from the cushioned pews of our churches, where we listen to excellent sermons, while the untouched problems of Southeast and Southwest Baltimore continually cry unto Heaven for solution. What unremitting, aggressive action is the united church conducting against the saloon, the race track, the rotten politics, and the crime of our city? What are we doing to purify our sluggish courts and what to put shyster lawyers out of business? What for the penitentiary and what for the jail? How many of us care enough even to be aware of the fact that 75 per cent. of our wage earners are getting less than will sustain a normal life? Do Christians know that the efficiency standard of a family calls for \$800 a year, and yet 90 per cent. of our workers receive less? Have we considered the fact that of families earning between \$700 and \$800 thirty per cent. are underfed; 52 per cent. are underclothed, and 58 per cent. are overcrowded, and that these damning conditions force children and mothers out into the labor market? My Christian friends such evils cannot be righted by proxy! You must, each and every one, give yourself in this service according to the fullest measure of your ability; opportunities will be found in abundance if you will only patiently seek them. The Christian church alone holds the solution of these problems, but so far she only bars the door and sleeps on.

It is a sinister fact that we are nearing the summer of 1916, and there has been no determined outcry for the publication of our vice report, and yet without this report we

have no standard to which to appeal to prove conditions, and no basis from which to work.

I bring here two indictments of our city by such a reporter as the impartial Survey (of March 25 and May 6, 1916), in hopes of rousing a few Christian consciences to stop singing "Fight the Good Fight," and to get out into the field of active, aggressive service, against these and all other civic ills.

First of all, let us demand the publication of the vice report, and let us go to war for righteousness in our own city and in our state; a war which shall last as long as life itself.

Here are the articles written by Mr. Winthrop D. Lane, and printed with the kind permission of the editor of the Survey.

UNDER COVER OF RESPECTABILITY*

SOME DISCLOSURES OF IMMORALITY AMONG UNSUSPECTED WOMEN.

By Winthrop D. Lane.

Baltimore has been cut to the quick. For nearly three months she has been gazing, amazed, incredulous, ashamed, at the sight of her own body, naked and exposed. Apparently Baltimore did not know that she had a body of flesh and blood and weakness. At any rate, the discovery has been too much for her. Sensitive Baltimoreans have been made to blush and cry, "Such exposure of the truth is indecent!" Callous Baltimoreans have been made to bluster and cry, "Such exposure of the truth is false!"

All this has come about through the most searching study of sexual illicitness that has ever been made of an American community. The commission that spent three years stripping the clothes off Baltimore did not stop with a mere report on commercialized prostitution. It centered its attention on the supposedly law-abiding, supposedly respectable, supposedly typical men and women of Baltimore, the men and women who fill Baltimore's office buildings, factories and stores, who occupy Baltimore's professions, who eat in Baltimore's restaurants and who rub elbows on Balti-

*Reprinted from The Survey, March 25, 1916.

more's streets at noon time. These the commission followed through the customary walks and haunts of life.

WHAT THE COMMISSION FOUND.

It found them, in unexpected numbers and in high station, mixing lust and the profits from lust with business and with pleasure. It found innumerable men, seated at their desks in private offices, seducing the stenographers and other young girls who work for them. It found managers in stores making gifts to salesgirls and calling them "dearie" and "sweetness." It found the traveling salesmen of these same stores making nobody knows how many advances to nobody knows how many different girls in the stores' employ. It found men arranging tempting "dates" with the girls who take their numbers at the telephone switchboard. It watched men preying upon waitresses in hotels and restaurants. It located them sitting across from pretty manicures in a hundred public establishments, often with no other purpose than to have their hands held, or their arms leaned on, or to arrange rendezvous. It found them taking women, married and single, to their private offices at night for immoral purposes. And, of course, it found them plentifully in the character of rich men—bankers, lawyers, business men—supporting one or more mistresses.

It followed them in their pleasures and found them holding week-end debauches at the shores that surround Baltimore, or infesting the movie houses and utilizing the semi-darkness for their overtures. It found them in dance halls, meeting girls for the first time and beginning relationships that ended in immorality. It found them in the parks, on excursion boats, walking the streets; wherever they went, there it found them in unabashed and unrestrained pursuit of women whom they could bend to their illicit wills.

And it found the supposedly respectable women of Baltimore, in numbers less large, but large enough to cause even greater surprise than the numbers of men, soliciting the attention of these men, meeting the men half way or succumbing in the end to their amorous advances. It found many girls—young, pretty, fresh—subjected to undue pressure from employers and male employes; sometimes the girls were able to resist this pressure, but often they were blinded by gifts and promises and their resistance was broken down. It found girls completing an evening's amusement by visits to "furnished rooms," and then lying to their parents at home.

It found them in every kind of compromising relation: unmarried, yet kept by two or three men; supporting the men to whom they gave themselves; making one man believe

they were loyal to him, when in reality they were the mistresses of several. ("It is almost the universal rule," says the commission, "for a woman not to be faithful to the man who is keeping her.") It found married women promiscuously immoral, sometimes with the consent of their husbands. It found many "charity" girls, so called because they were willing to prostitute their bodies but were indignant at the offer of pay. It found girls frequenting saloons, assignation houses, theatres, dance halls—every place that men are—now just beginning to tread the road that leads to confirmed immorality, now well advanced on the road, now at its end.

All this the commission found, not with respect to the men and women whom everybody knew to be immoral, but with respect to the people whom nobody knew to be immoral. In using the word "immoral" the commission does not intend, one may suppose, to damn every instance of human susceptibility or infatuation. It took the community and its codes as it found them—certain commandments professed, certain statutes accepted, and certain relationships between men and women presumed. And on every side it found the commandments forgotten, the statutes broken and the relationships daily abused and disregarded.

Neither, one may suppose, does the commission imagine that Baltimore is unique in these respects. Comparisons with other cities were not its business, nor could it have made them if it had wanted to, for similar information concerning other places was not at hand. The commission went after facts in regard to Baltimore, and having secured these it was willing that the people of Baltimore should see themselves in the mirror the facts afforded.

MACHINERY OF ILLICITNESS.

Surrounding all this clandestine illicitness, the commission found a gigantic and recognized machinery of immorality, profiting from lust and protecting it. Out of 796 "furnished rooms" investigated, the commission found that 622 plainly cater in one way or another to immorality, while 55 are doubtful. One hundred and ninety-six allow only one man to call; the rest are open, that is, any number of men may call. Among the 118 small apartment houses and private residences transformed into apartments, 111 were found to be questionable, that is, they agreed to rent rooms to persons professedly immoral or who stated that they would use the rooms quietly for questionable purposes.

Hotels were found that either encouraged or winked at the illicit use of their rooms. Cafes and restaurants revealed themselves in large numbers as stamping-grounds of solici-

tation. And everywhere there were saloons supported in part upon the proceeds of licentiousness. In the rear of forty-seven saloons unescorted women were constantly seen, actual solicitation was observed in twenty-eight, while twenty were connected with assignation rooms. A few were frequented by women, who, on their own statements, practiced perversion.

Over and above all this the commission found the sinister colossus of political protection. * "We found it to be an incontestable fact," says the report, "that the disreputable saloons, gambling houses, houses of prostitution and disreputable furnished room houses were all assured protection, provided they paid a certain sum of money or a certain pecuniary equivalent." Let us look at this a little further:

"There is one man who is the 'boss' (hereinafter referred to as 'political leader'); whatever he says may run, is let alone; whatever he says must be closed, is closed. He claims the power to appoint the marshal of police, and to elect a state's attorney of his own selection * * * He furthermore claims control of the elections, and consequently the county. He works his graft through three men * * *

"In addition to this the 'political leader' himself owns four saloons and has a controlling interest in a majority of the gambling games in the various parks. From the others he exacts a certain percentage.

The commission found a general belief among the under-world that no arrests are made, except in very ordinary cases, unless this leader gives his consent. When a place is threatened with a raid it is usually tipped off in advance. Protection money is paid quarterly and monthly, regularly appointed collectors going through the county to gather in the toll. As a waiter in a saloon said to one investigator: "Didn't you see that short, thin man who I. A. M. I gave money to? That was —, a deputy, who came after the graft."

J. J. J., who conducts a bed house at — East — street, told one of the investigators that there was absolutely no danger of interference by the police; that if anything was going to be pulled off she would immediately be tipped off by B. C. A. (the political leader.) "When asked whether she gave the police officers graft, she replied 'No, indeed, they are no account,' and also said that she did not know who was on the beat or what they looked like, 'as the county police is just a farce.' She said that, of course, she had to

*Since the writing of the above there has been an entire re-organization of the Baltimore City Police Force. These strictures, therefore, do not apply to the present administration.

continually give up graft to B. C. A., but she did not mind that as long as she was making good money." She paid her protection she said, through her brother-in-law, who takes care of some of B. C. A.'s gambling games.

This woman told the investigator of an incident last winter that resulted in the loss "of one of her best girls." She said this girl brought from five to seven men to her establishment every night. While the grand jury was in session she received word from B. C. A. not to do any business until he told her to go ahead. The girl brought a man to the house shortly thereafter and J. J. J. would not let her in. The girl thereupon became offended and has not been back since. J. J. J. said she hated to lose such a good girl, but she "had to obey B. C. A.'s orders."

PERSONNEL OF THE COMMISSION.

The body that has thus exposed Baltimore to herself was appointed three years ago by Governor Goldsborough. It does not bear the appearance of a group of either purists or sensationalists. On it are some of the state's best known men and women, representing a wide variety of occupations: Dr. George Walker, associate in surgery at the Johns Hopkins Hospital, chairman and director of investigations; Howard Schwartz, banker; Jesse N. Bowen, lawyer; Dr. John M. T. Finney, clinical professor of surgery at Johns Hopkins; J. W. Magruder, general secretary of the Federated Charities of Baltimore; Louis H. Levin, secretary of the Federated Jewish Charities; George Dimling, grocer; Walter L. Denny, dealer in wall paper; Frederick H. Gottlieb, retired brewer; Robert Biggs, secretary of the St. Vincent de Paul Society; Anna Herkner, associate to the chief of the Maryland Bureau of Statistics and Information, and Dr. Lillian Welsh, a practicing physician and member of the faculty of Goucher College. Simon Stein, banker, died before the commission completed its work. All of the members of the commission but one signed the report, which was written by Dr. Walker. Mr. Gottlieb submitted a minority statement favoring the return to a segregated vice district for the city.

The method of the commission was a direct investigation of actual facts; it did not hold hearings in a room and summon witnesses to testify before it. For three years its men and women investigators have mingled with the unsuspecting townsfolk of Baltimore—now holding jobs in stores and factories, now sitting idly in saloons and cafes, now establishing intimacy with owners, landlords, real estate agents, janitors, anyone in fact, from whom pertinent information could be secured. Three-fourths of the 1,200

typewritten pages constituting the report comprises specific cases of conditions found. Heart-to-heart talks with girls who thought they were chattering aimlessly to kindred souls are followed by the cynical confidences of men and women steeped in the viciousness they were revealing.

For this work the commission trained its own investigators for the most part, though a few were imported from other cities for the value of their experience. For five months the inquiry was directed by George J. Kneeland, of the American Social Hygiene Association. Mr. Kneeland was director of investigations in the Chicago vice inquiry several years ago and has participated in similar studies in Philadelphia, Newark, Syracuse, N. Y., and elsewhere.

The unique contribution of the inquiry was its study of the individual. One of the things Baltimore couldn't bear to hear was the conditions that surround the employment of women in private offices. Of this, the commission said:

"The investigation disclosed one of the most serious features of the whole problem, to wit: That there are many well-to-do and prominent men who have wives and families but who do not hesitate to employ every possible means to induce the young girls in their offices to have immoral relations with them. We have many instances of refined and gentle girls who have gone into these offices and finally succumbed to the men about them. Many of these men are of middle life and over, have grown children and even grandchildren, and yet they do not hesitate to use their employes in this way.

"Most of the girl employes come from plain people, with small incomes and very modest homes. Their employers represent prominent men of wealth who are intellectually and socially far above the fathers of the girls or any men with whom they have associated. When such a man begins to compliment a girl and pay her a little attention, she is very much flattered and is prone to let him continue his advances. He furthers his intentions by asking her some day when they are very busy to lunch with him; then later, when they are not so busy, to lunch with him again.

"Finally, he takes her to dinner after the office work is finished. Then he asks her to stay in the evening to do some additional work, for which he pays her more than it is worth, or gives her a present. This course, with various digressions, is kept up until after awhile at an opportune moment his purpose is accomplished. His plan, though seeming to be an accident, has been carefully worked out from the first.

"In occasional instances the employers coerce the girls into yielding by giving them to understand that they will

lose their places if they do not. There are several men whom we have on our list, who have openly stated that they would not employ a girl who is strictly moral.

"Another thing that has been found in studying the office buildings is that usually there are several men in each building who look out for every young and pretty girl working there and try to devise some means by which they can get their clutches on her. This is worked through other girls in the buildings who act as go-betweens and introduce the girl to these men. A particularly vicious thing that has come under our notice is the continuous effort that has been made by these men to induce a pretty, quiet and perfectly moral girl of eighteen to come to their offices late in the afternoon. The investigators were fully cognizant of this while it was being done, and knew all of the efforts and means that were employed. The girl was protected and has never yielded.

"In the whole course of the investigation there is nothing more reprehensible than some of the immoral practices of a number of Baltimore's esteemed and prominent business and professional men. The practices of the red-light district are pale and mild compared to the acts of some of these so-called 'Christian gentlemen.' A few of them, not satisfied with seducing the girls, carry it further and persuade and sometimes coerce them into perverted acts.

"We are led to believe that of all occupations for women, the close association with a man in a private office is one of the most likely to lead to immorality. Parents and guardians should be fully aware of this danger that a young and inexperienced girl is liable to encounter."

THE MENACE OF THE STORES.

In several large stores conditions were found to be little better. The commission inquired into three of these by putting its investigators in as employees. Here the girls come into contact with men customers, traveling salesmen, heads of departments and others engaged in the store. An attractive girl, the commission found, is in many instances beset by these men until her resistance is broken down. Fine clothing and other evidences of luxury often tempt her to devise some means by which she can increase her small wage. Though the commission did not find any direct evidence to show that girls had begun immoral conduct on account of low incomes, it did find that after girls have once become immoral their low wages are in part responsible for the illicit relations that continue and become habitual.

A variety of ways, the investigation disclosed, are re-

sorted to by men in stores to establish immoral relationships with girls:

"The employer promises to keep the girl during the dull season and gives her advantages in the way of position and work.

"He makes her presents of clothing, jewelry, etc.

"He leads her to believe that unless she accedes to his demand she will lose her place.

"He gives her generally to understand that he will take care of her during all circumstances if she will allow him liberties."

An official in one store who had been married three times and divorced twice, exerted every effort to make dates with girls and called them "dearie" and "sweetness." He showed one girl a picture with suggestive doggerel on it. The girls "do not seem to think," says the report, "that anything is meant by this freshness, and they say he treats them kindly and is easy to work under."

Here is the method pursued by another man:

"M. I. N. took E. F. to dinner at —'s, and after this went to a private room with her. He has on a number of days gone up to floor No. — and tried to make dates with E. C.; he has patted her on the cheek, tried to kiss her and asked her to go automobile riding with him; she has always tried to keep out of his way, and has been afraid to be rude to him for fear she might lose her position. She says she does not want to have anything to do with him in an immoral way, but that he has made several other girls go out with him. On another occasion he was at a hotel Saturday night having supper with one of the salesgirls; after that, it was believed, he went to a private room."

Another man wanted to make a week-end of it:

"M. B., manager of Department —, invited Miss B. C. to go out with him some evening; he said they would go first to a dance-hall, then to a hotel to supper, where they would have plenty to drink; and finish the night, Saturday and the next day, Sunday, in his apartment. It was his plan to have another man, a manager of a department, go with them, and the girl was to get another girl in the store to go along."

Not all the danger to girls in stores is from within. "There are, and we have repeatedly met," says the commission, "a number of women who keep houses of assignation or other questionable places who go to these stores and try to induce attractive girls to come to their homes." Indeed, in at least one store, a member of the firm was on friendly

terms with such a woman and frequently treated her at the soda fountain when she came in.

"It is said on fair authority," declares the report, "that he has some business arrangement with her and there is plenty of evidence to show that she has had for some time welcome access to his store and can talk to any of the girls she wishes. Recently she came twice in one day and openly admired one of the young girls and complimented her on her beauty. We have also evidence that some of the girls in the store have been at her house; it is most likely that she has procured a number of her inmates through its connection." Some of these inmates also shop at the store, one of them displaying and boasting of a \$1,500 coat that an old man had given her.

OTHER EMPLOYMENTS.

In two factories investigated, the commission found that young girls are often subjected to the harmful influence of older women, but it did not find the management itself guilty of conduct leading to immorality. Neither, in the exchanges of the telephone company, did it find temptation coming to the girl operators, though in the private branches, particularly those in public places, the case was different. Here, especially in hotels, railroad stations and large office buildings, the operator is thrown into contact with many men, and the investigators found that a large number of the girls succumb to suggestion.

A girl who acts as waitress in a restaurant, the commission declares, is subjected to almost uninterrupted solicitation. Many men presume that on account of her position it is safe to make some kind of proposal to her. "Some of the girls resist all of this and maintain their integrity; but many are struck down and go along with the current." The commission believes that only older and more experienced women should be selected as waitresses, and points out that in Norway the law imposes a minimum age limit for waitresses in public places.

The manicure who is not immoral, says the commission, is an exception. If she is straight when she goes into the business, the surroundings soon overcome her scruples. "It may be said in justice," says the report, "that some very ladylike men are desirous of having soft white hands, with polished finger nails, and have no immoral purpose whatsoever," but "many of the men who frequent the establishments go there for some kind of sexual purpose." Particularly is this declared to be true of barber shops. "In certain shops an arrangement may be made through the barber with a selected girl."

THE KEEPING OF GIRLS.

The keeping of girls by men who can afford such a luxury drew the special attention of the commission.

"We have no former data," says the report, "upon which to base a comparison as to whether this form of prostitution is increasing or not. It is certainly not new; indeed, it is as old as marriage itself. It would seem that as the number of rich or well-to-do men increases in the community there is a corresponding increase in this form of immorality. When a man has sufficient money to offer a girl ease and luxury, it is the simplest matter in the world to find the girl.

"Since the investigation has disclosed these cases, with such comparative ease, it is reasonable to suppose that there are in reality a large number of such alliances. It would be interesting to note just how long these relations continue. Most of those that we investigated have been in existence only a short time; some, on the other hand, have continued 15 or 20 years, and a few no doubt continue through life.

"Considering, however, the fact that it is largely a commercial bargain, one buying what the other has to sell, it seems natural that the relation should tend to fail as the commodities diminish in value. The girl takes the man entirely for his money; the man takes her for her youth and charm; but as these begin to fade he grows tired and seeks some fresher and newer body. She in turn looks for another man.

"If she succeeds in retaining her attractiveness, the relation may extend over a number of years; but, alas, too often the charm is transitory; a few, a very few years suffice to destroy the freshness, and nothing is left that anyone wishes to buy. It would seem that if a woman realized how unusual is this charm and how delicately attractive, but on the whole how transitory, she would be unwilling to make it a subject of barter."

And in another place it says:

"It is almost the universal rule for a woman not to be faithful to the man who is keeping her. Of course, every man thinks that he and his particular girl are exceptions; though admitting the above proposition in general, he gives you very definite reasons why he knows she is true to him, and he believes without question that his case is a unique exception to a maiden's ways. But in spite of all his protestations, the poor fellow is going the way of all such men, and is suffering either from an egotistical imagination or from the figment of a disordered brain."

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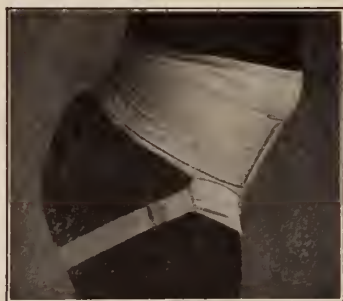
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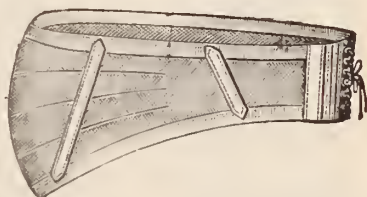
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Business Manager

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915 Washington Street

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MEDICAL AMALGAMATION.—The trend of medical educational institutions towards union or amalgamation is only another product of the industrial era. Economists have traced the growth of corporations through the various stages of the factory system, from the first small plant, with one man and only one machine, to such giants as the United States Steel Corporation. Likewise, our medical schools have grown from small groups to larger and larger classes. The result of this, as well as of the ever increasing complexity of the medical sciences, has been to increase the necessity for specialization: this in turn demands a bigger and better institution, establishing thereby a cycle of cause and effect. The latest attempt at this sort of thing—enlargement, improvement and amalgamation—in Philadelphia, has been postponed for one year, after which Jefferson Medical College will become a part of the University of Pennsylvania. The Medico-Chirurgical College is already a party to the scheme. The aim is to make Philadelphia the medical center of America. Whether this can be done remains to be seen. Even in the older countries of Europe there is no one city that stands out in the medical firmament like an evening star—one excels in one branch, and another

city in some other branch of the medical sciences. However, since America has been unique in so many things, it is within the realm of possibilities that, within another generation, Philadelphia's ambition may be attained. But she will certainly have to "go some."

A VICTORIOUS DEFEAT.—The suit of the Chattanooga Medicine Co. vs. the A. M. A. has been settled, the plaintiffs receiving an award of damages amounting to one cent, technically a defeat for the A. M. A., but actually a victory over the promiscuous claims of the nostrum vendors. The jury was evidently facetiously inclined to the doctrine that one good turn deserves another, in other words, a cent for a "scent."

At last we know why Chicago is called the Windy City. An exchange furnishes us with a list of 212 women doctors there.

LEPROSY INVESTIGATION.—The report of the hearings held before the Senate Committee relative to the establishment of a national leprosarium has just been published, and while rather voluminous, furnishes some very interesting reading. The preface, which we reprint here (S. Doc. 4086-64-1,) gives a brief summary of the evidence taken, and is as follows:

The testimony here recorded was given by physicians of national and international reputation, by missionaries, by sanitarians, and others conversant with the distribution and spread of the disease which has been so long the scourge of the human race that its history loses itself in the mists of antiquity.

The evidence clearly shows that leprosy is a chronic mutilating disease, whose victims inspire such a horror in the public mind that they are ostracized, harried from place to place, at times being locked up like common criminals, and at others undergoing treatment which for refinement of cruelty is worse than death itself. It is brought forth clearly that the disease is widespread in the United States to an extent that is little realized. Some of the witnesses testified that the disease is on the increase, and all agreed in the statement that segregation is the only effective means for the eradication and prevention of leprosy. The witnesses also unite in agreeing that on humanitarian and economic grounds the only way in which to attack the leprosy problem in the United States is through the erection and maintenance of a national home for lepers. Not only is this the most humane way in which the unfortunate sufferers from a loath-

some communicable disease may be treated, but it is also the most economical, because the overhead costs of caring for 100 lepers is not very much greater than the overhead cost for caring for 20 lepers. All of the State health officers are in favor of the bill, and it has the official indorsement of the American Dermatological Association, the American Medical Association, the American Academy of Medicine, and the conference of State and Territorial health authorities.

The incubation period of leprosy is very long, sometimes as many as 30 years elapsing between exposure to the disease and the development of symptoms. It is, therefore, practically impossible for the United States to exclude cases at quarantine unless they are in the active stage of the disease. As a result our people are going abroad, particularly to the Orient, becoming infected, returning home, and developing the disease many years afterwards. This is particularly shown with regard to soldiers who have served in the Philippines.

Communities are, as a rule, absolutely unprovided with proper means for the care, segregation and isolation of lepers. At the present time there exists no national institution for the reception and care of lepers in the continental United States. Lepers do not desire to escape from well-conducted leper settlements, and there is no danger to surrounding communities from a leper home, provided the home is well conducted.

Aside from the cruelties which are now imposed on the poor leper himself, scientific men are deprived of a place in our country where leprosy may be studied in all of its manifestations, and means for its cure and amelioration sought. A national home for lepers would not only be a haven of refuge to the diseased person himself but would also be a great scientific workshop wherein clinical and laboratory workers could focus their energies on the conquest of one of the most terrible diseases which afflicts man.

The evidence which follows brings out the striking fact that lepers are constantly engaged in interstate travel, and thereby constitute a menace to the public health. In many instances it has seemed well-nigh impossible to determine the residence of these lepers, and they move from place to place, becoming an economic burden on communities on which they have no rightful claim. Since the Federal Government exercises control over interstate commerce, it is the duty of the General Government to see to it that the States take no harm through such commerce. In this instance it becomes the duty of the Federal Government to see to it that

the States take no harm through leprosy which is undergoing interstate transportation.

There is no doubt a constantly increasing tendency by physicians not to report cases of leprosy which are diagnosed as such. The outrageous treatment accorded lepers by a public possessed of a leprophobia, the newspaper notoriety which inevitably ensues whenever a case is reported, and the harrowing and frightful experiences which lepers are obliged to undergo, have caused physicians to seriously object to reporting cases to the health authorities. One physician testified that he and his co-workers had agreed, following the impression made upon their minds by the harrowing experience which one of their cases had undergone, to never again, until proper facilities were provided for the humane care of their cases, declare a man a leper. If we are to believe the testimony of the experts who have appeared before us this will inevitably tend to further increase the number of cases of leprosy. Those who are familiar with the leprosy situation in the United States undoubtedly realize that even at present this unwillingness to report instances of infection by physicians and health organizations is in part responsible for the spread of the disease.

The testimony of the medical witnesses summoned before us goes to prove that we must rely upon segregation and isolation of those afflicted for protection against this disease. Unfortunately the scientific world is as yet ignorant of the means of transmission from individual to individual. Whether the conveyer of the infection is a blood-sucking insect, or whether the organisms are introduced into the system in some manner by inoculation, is quite unknown. Theories have been advanced again and again, in each instance either to be discarded or merely to be retained as a theory after every means of establishing proof has been exhausted. The brightest medical minds of centuries have grappled with the problem, but in vain. It is true that advances have been made, and we should not forget that we owe to Nansen the discovery of the bacillus, and to one of our own Americans, Clegg, the honor of having first grown the organisms in artificial media, each of these accomplishments being a long step toward establishing a cure. But until the day arrives, and there is no doubt in the minds of many that the time will soon come, when we can protect the public by curing the individual, we must altogether rely upon segregation as a prophylactic measure.

It is fortunate, indeed, that in segregation we have a method of protection which, if utilized, is wholly sufficient to prevent the dissemination of the disease. There can be no doubt on this point. Not only have we the testimony of

the experts who appeared, but the historical facts themselves warrant that conclusion. Wherever segregation has been thoroughly tried, irrespective of the amount of infection present when instituted, it has resulted in a diminution, if not a total eradication, of the disease. Europe was freed of the infection in the Middle Ages through segregation alone, and our own results in the Hawaiian Islands and the Philippines clearly indicate that in time these areas, which previously have been hotbeds of the infection, will be entirely freed from the disease. If such results can be obtained in districts where the disease has been rampant, it is reasonable to conclude that by the adoption of similar preventive measures the infection can be eradicated from the entire nation.

Leprosy was known to the world long before the Christian era. In the ancient writings of the Chinese, Syrians and Egyptians there are allusions to a fatal, disfiguring affection which we are warranted in assuming was the same as the dreaded scourge of today. Throughout the East the disease was rampant. At the time of Christ the cry of "unclean" was as familiar to the ears of the multitude as is the most common word of warning in our language of today. The edicts of earlier years, "All the days wherein the plague shall be in him he shall be defiled; he is unclean; he shall dwell alone; without the camp shall his habitation be" prevailed, and the mutilated forms of the afflicted huddled about the gates of every city of Palestine.

The earlier Greeks knew little of leprosy. Hippocrates, in whom the medical wisdom of the ages seems to have centered, barely mentions it in his writings, and to him it must have been a rare and exotic affection. Aristotle, however, described it vividly. It is, therefore, a reasonable conclusion, unless we are willing to accord to Aristotle greater discernment in medical matters than we grant to Hippocrates, that some time during the half century which existed between the lives of these two men, the disease became of sufficient importance to attract the attention of the sages of that age. From that time, nearly four centuries before Christ, down to the present day, the infection has been indigenous to the soil of Greece.

It was not until the Roman Empire was at its height, following the conquest of foreign lands, that the disease was introduced into Italy, but from there it spread over all Europe. It was present throughout Spain and France when the Moors swept up from the South and it had become a common and familiar affliction in England even before the Norman conquest. During the Middle Ages no country of Europe escaped the disease. With plague and smallpox it

constituted the most fearful scourge of mediaeval times, until rulers and clergy becoming alarmed at its rapid extension and terrible ravages, instituted measures for its control. The repressive measures of that day, while not altogether based on humane principles, recognized that the disease was communicable and called for the segregation and isolation of those afflicted. So widely disseminated was the infection that every considerable town had its institution or hospital in which the victims were segregated. In England the first of these was erected at Canterbury in 1096, and throughout Europe there was probably a total of at least 20,000 leprosaria of this character. Wherever such means were adopted for its control a marked reduction in the incidence of the disease ensued, until finally only the records of earlier days remained to tell the story of its ravages. There still linger in Norway and along the shores of the Baltic, however, foci of infection dating presumably from that time, although these are being rapidly extinguished through compulsory segregations. For a hundred years the disease has been non-existent in England, outside of the relatively few cases developing on foreign soil, and Germany, France, and to a certain extent Spain, have been equally successful in eradicating the last traces of the infection.

It is uncertain when leprosy invaded the Western Hemisphere. Possibly it was brought by the early Spaniards or it may have been introduced from Africa in the days of the slave trade; at any rate there is no mention of the disease in the early historical writings. At present, however, it occurs sporadically in many sections. Mexico, Brazil, Colombia, Venezuela, Chile and Peru all report cases. Countries with such contrasted climatic conditions as Iceland and the Hawaiian Islands have been visited and in each instance the disease has spread. Though the infection probably reached the islands of the Hawaiian group about 1848, opinion seems to differ somewhat. In 1865 approximately 1 of every 300 of the native inhabitants was affected; by 1891 this proportion had increased to 1 in 30, since which time, following the institution of repressive measures, a rapid diminution in the number of cases has been observed.

At present, with the exception of the areas mentioned, the disease is practically world-wide. It is common enough in the Philippines, Japan, the Malay Peninsula, China, India and Africa, and the residents of no climate are exempt. It has greatly increased in South Africa, and has attacked Europeans as well as natives. In Australia it was introduced by the Chinese, but has in no respect confined its ravages to that class. It is safe to say that no particular portion of any population possesses immunity, and there is none in

whom the disease may not occur. Whether they live on mountain or plain, at the coast, or in the interior, matters little; once the infection has been introduced it usually spreads. While the degree of communicability may not be as great as was formerly supposed, and the length of exposure must probably be long continued, there is not the slightest reason to doubt that every case must arise from a pre-existing case. The truth of this statement is borne out by the fact that wherever segregation and isolation have been practiced, a decided reduction in the number of cases has been the result.

UNDER COVER OF RESPECTABILITY*

SOME DISCLOSURES OF IMMORALITY AMONG UNSUSPECTED WOMEN.

By Winthrop D. Lane.

[CONTINUED FROM MAY NUMBER]

Not all the immorality above described is to be regarded as the man's fault, thinks the commission. It "has learned to look upon the responsibility of immorality as resting about equally on the woman's and the man's shoulders, provided that the man and the woman are of the same age and have the same mental and financial equipment. But when a man of from forty to fifty systematically goes after one of these girls of eighteen, the responsibility is much greater on his part than on hers. She is young, ignorant, poor and unfortified; she is intoxicated with his money; she is excessively flattered by his attentions; she is delighted with his dinners; she is charmed with his gifts—and is it any wonder, when she is naturally weak and non-resistant, that she yields to him? He, on the other hand, is strong, with a clear knowledge of the world, equipped with money and influence, and other advantages that inspire trust in him. If he preys upon the girl it is a selfish and heartless act for which legal punishment is insufficient."

All this is but part of the picture Baltimore could not stand. The classification of "furnished room" houses, apartments, hotels, saloons, restaurants, theatres and dance halls was another part; the exposure of immorality as a common-

*Reprinted from The Survey, March 25, 1916.

place in parks, at private shores surrounding Baltimore, on excursion boats, and in other places of amusement, was another part; and the exhaustive investigation of commercialized prostitution was still another.

There are no licensed houses of prostitution in Baltimore today; they have been eliminated by the "gradual" method. Ten years ago there were 350, with 1,400 inmates. An unofficial but active crusade against such places stirred the Police Board to action some years back, so that a set of rules was put in force and registration was demanded. The madams were led to believe that they would soon have to discontinue, inmates began to desert and patrons to be frightened, and many houses closed voluntarily. This gradual elimination, hastened by the activities of the Vice Commission, continued until a few months before the commission made its report, when the last place went out of business.

Meanwhile the commission had made a careful study of the inmates of houses still existing. Disease was one of the things investigated. Physicians went into the houses, examined the bodies of girls and took blood tests. Of 289 girls examined for syphilis, 177 (63.27 per cent.) showed its presence. Among 266 examined for gonorrhea, 245 (92.1 per cent.) showed its presence clinically or microscopically. Nearly half the girls examined had both diseases, and only 3.39 per cent. had neither.

THE CITY'S REACTION.

When Baltimore was presented with this picture of herself, of which the foregoing is but an adequate glimpse, the responses were swift and intense. The report was submitted to the Governor, Thursday, December 23; without reading it, he told Dr. Walker to use his own judgment about giving it to the press. Next day each newspaper in the city had a copy. Seldom has such a bomb been exploded in the circles of Baltimore journalism. Monday afternoon, when the report was released, every paper gave large headlines to it and some devoted whole pages to its contents.

Immediately the offices of the commission, the residences of its members, and the editorial desks of the newspapers became the centers of violent telephone calls and letters from outraged citizens. "Publication of such a report is a disgrace," said some. "Baltimore is the cleanest city in the world," shouted others. "A mass of filth, obscenity and abominations," one man characterized the findings. "Stating publicly that vice has its profits will only attract girls to vice," wrote another. "No such conditions exist," said Mayor Preston, when interviewed, while State's Attor-

ney George Hartman declared sorrowfully: "I was immeasurably shocked at the discoveries of the Vice Commission. After reading the headlines I perused a few chapters in the Bible, which I considered very much more profitable."

One of Baltimore county's grand juries happened to be sitting at the moment. Amazed that there should be so much breaking of law of which it itself knew nothing, it summoned Dr. Walker and one or two other members of the commission before it in a laudable effort to be further informed. But when it demanded the names and identities of persons alluded to in the report, Dr. Walker and his associates replied by closing their lips. Thereupon the grand jury talked of contempt proceedings, but presently thought better of that matter and decided that the names weren't what it wanted. It ended by turning in a report favoring the continuance of "abolition" with respect to a segregated district, thereby breaking sharply with a long list of its predecessors, which had invariably cried aloud for segregation.

Of commendation the report and the commission received few words. Not even today has any considerable group of Baltimoreans made the commission feel that its work was appreciated or valuable. Here and there a voice was raised in the wilderness, but for the most part the city has remained indifferent or openly hostile. The grand jury's report is the only official or civic response yet made to the conditions revealed.

"These vice reformers are a nine-days' wonder," said a brazen, leering bed-house keeper to one of the commission's own investigators; "their craze soon blows over." So it would indeed seem. Not even the final recommendation of the commission, for a permanent moral welfare board, has been lifted from the place it occupied three months ago—the body of the report.

Meanwhile, there is hope that the report will be printed in book form, so that cities of similar characteristics and greater imagination may profit from the vicarious information that comes from knowing what one's sister communities are like.

AT YOUR SERVICE*

A safe, legal and practically certain method of killing any new-born infant whose existence is embarrassing to either parent. Illegitimate children a specialty. The younger the infant the better the chance of death; but we are constantly successful with babies several months old.

NUMEROUS CLERGYMEN, PHYSICIANS, nurses and midwives are our best friends and abettors. Consult them without hesitation. Also the staff officers of various institutions and hospitals.

WE GUARANTEE protection to the good name of the mother, while we save the father from the consequences of his act.

N. B.—FEE REQUIRED in advance. No extra charge for burial.

This gruesome advertisement might be employed by two well-known institutions in Baltimore that receive infants immediately after birth for supposedly humane care. The "traffic in babies" in which these institutions deal, with the aid of doctors, ministers, nurses and others, was disclosed in the recent investigations by the Baltimore Vice Commission. This commission, headed by Dr. George Walker and including some of the best-known men and women of Baltimore, spent three years at its task. It sent its investigators into stores, factories and apartment houses and conducted the most searching study of sexual immorality carried on under cover of respectability that has ever been made in America.*

*The Survey published, in its issue of March 25, a summary of the general findings of the commission and a description of the city's reaction when these findings were made public.

In line with its deliberate policy, the commission report does not give the names of the institutions. The names are unimportant to people outside of Baltimore; there they are well known. The facts, the elaborate exhibit of methods and results are of concern to every other American city, where similar institutions may operate.

The commission found that any one in Baltimore, if he has the money, can put a child into either of the local in-

*Reprinted from The Survey, May 6, 1916.

stitutions. A woman investigator went to one of them, pretending that her niece was pregnant and desired an absolutely private place where she could be confined and her baby be permanently "put away."

The superintendent told the investigator that the institution would take the niece at once. If the niece wished to go into a ward, said the superintendent, the price would be \$3 a week until her confinement, and then \$7 a week; in addition, there would be a fee of \$30 for the services of doctor and nurses. If the patient preferred a semi-private ward the price would be \$9 a week until confinement, and \$10 a week for the three following weeks. For a private room the price would range from \$12 to \$20 a week. In each case \$30 would be charged for doctor's and nurses' services.

If the child were to be left in the institution, the superintendent went on, it would be separated from its mother at once and placed in the nursery. This would cost \$125 and must be paid in advance. The girl would be required to sign a document, relinquishing the child entirely to the institution; the child must never be asked for, heard from nor claimed under any circumstances. If the girl were able to pay a larger fee, \$200 would be asked. This the superintendent thought a very small charge.

If the mother wished to retain the privilege of claiming the child at some future time, the babe would be boarded at the rate of \$20 a month. Later the mother could relinquish it entirely by paying \$125. If the girl had a private room, the superintendent said, no one in the world would ever know that she had been there.

In order to determine the attitude of physicians, clergymen, nurses, midwives, superintendents of hospitals and others relative to the permanent separation of a new-born infant from its mother, the commission interviewed a number of individuals in each of these groups.

Of thirty clergymen, including Protestants, Catholics and Hebrews, only two interposed a serious objection. All but these two were willing to help; three went further and said that they would accept money for their services. One was willing to receive \$100; another \$150; another \$250.

"Only one of two things can be said about these men," declares the commission; "either they are willing knowingly to aid in the killing of a child; or they are ignorant of what they are doing."

Forty-nine doctors were interviewed and forty-two were willing to aid in the procedure. All were to charge a fee, some of them a double fee. Sixty-nine nurses were sounded, and only four said they did not believe in the practice. Of the midwives, over a hundred of whom were interviewed,

only two refused; the others seemed to think the plan not even conventional; one went so far as to consider choking the child as soon as it was born.

The commission found, too, "a few so-called social and religious workers who jumped at the chance and were eager—yes, greedy—for the fee offered. In justice it should be said that members of the well-known charitable organizations were interviewed concerning this, and they refused to take any part in it."

"And the institutions!" exclaimed the commission. "Day after day, month after month, year after year, they receive healthy, plump infants into their wards and watch them hour after hour go rapidly down to death. They know that practically all of those that immediately after birth are separated from their mothers will die; yet year after year they keep up this nefarious traffic."

In trying to learn what became of the child, once it had landed in one of these hospitals, the commission had access to the actual records of the institutions themselves.

Many babies not only failed to show a normal increase in weight by week, but actually declined. Inanition, congenital debility and other forms of nutritional disturbance were frequent. During the five years from 1909 to 1913, 71 per cent. of deaths in one institution were due to causes of this nature; in the other institution, 78 per cent.

THE HAND OF DEATH.

As for the general mortality rate itself, the commission found the hand of death seizing these motherless infants with substantial inexorableness.

"Thou must not kill; but needst not strive

Officially to keep alive."

runs an ironic revision of the sixth commandment. This the institutions have apparently taken to heart with tragic literalness. Of children entering in given months, the commission sometimes found one or two survived a sufficient time to make normal life a possibility; sometimes it found as many as six or seven; and occasionally it found that none had survived.

Here is the monthly record of babies admitted into one of the institutions in 1913. Most of the deaths occurred within three months of admission:

Babies		Babies	
admitted	Died	admitted	Died
January 29	21	July 22	15
February 22	20	August 24	18
March 28	21	September 15	13
April 17	15	October 7	6
May 22	21	November 9	7
June 10	9	December 15	13

These figures reveal a mortality rate, among 219 babies, of 81 per cent., compared to the usual mortality rate in foundling asylums of from 25 to 60 per cent., and the normal rate in the general population of 12 to 14 per cent.

Even this figure, however, gives the institution the benefit of the doubt. Only those babies are accounted dead for whom a record of death is at hand. There are others for whom no record appears, and it is not known whether they lived or died.

Furthermore, the 219 include those nursed by their mothers in the institution. If babies so nursed are omitted and only those considered that were thrown entirely on the resources of the institution, we find 194 admissions in 1913, 163 deaths, and a mortality rate of 84 per cent.

Other years were little or no better. In 1912 the rate was 88.8 per cent.; in 1914, 78 per cent.

The other of the two institutions received fewer babies, but was no more successful in keeping them alive. Of 31 received in 1912, 25 died; of 45 in 1913, 43 died; of 33 in the first eight months of 1914, 24 died. The mortality rates were respectively, 80, 85 and 72 per cent.

These figures include babies who had reached the age of six months when they entered the hospitals. Lucky indeed is the infant who manages to round out his first half-year before he begins his institutional life, for if he has not completed his first month when he enters, his fate is sealed beyond all hope. A special study of babies who entered one institution less than a month old showed that in the fifteen years beginning in 1900, not a single one, who was not otherwise removed from the institution within six months, lived. In the other, the mortality rate was 97.5 per cent.

A LESSON IN GHOUlishNESS.

If little responsibility is felt for these children while they live, even less is manifested when they die. Jerry Cruncher could take lessons in ghoulishness in Baltimore today. Two of the dead babies are placed in a small wooden box three feet long, one foot wide and one foot deep; the heads occupy the respective ends. The same undertaker always conveys the box to the cemetery. He places it at the side of the hole in which the children are to be buried, notifies the attendant and leaves.

The method of burial used by one institution is described by the commission as follows:

"A large hole four feet wide, seven feet long and eight feet deep, is dug. As they arrive, the bodies are buried in this hole until it is nearly full. The space accommodates from 95 to 100. The actual burial is simple. The box (when

the hole is newly dug) is placed at the bottom, and four of five shovelfuls of earth, just sufficient to cover it, are thrown in. The opening of the hole is then covered with rough planks nailed together in the form of a door. As other bodies are brought, they are placed alongside the former ones and covered in the same manner. An investigator who was stationed fairly near, stated that the whole procedure took about ten minutes. When a hole is filled with coffins up to within a foot and a half of the surface, earth is thrown in; and a new hole is dug for future burials.

"The burial place comprises a plot of ground; irregular in shape, that measures 57 x 60 x 51 x 39 feet. We estimate that in this place there have been buried nearly 5,000 children. This has necessitated digging up the bodies of those that have been buried for several years in order to make room for the newly-dead.

"This method of burial is open to criticism from at least two points of view: First, the requirement of law that a dead body shall be covered a certain depth—which here is not done; second, the natural supposition is that the body of a child is not to be dug up after two or three years and thrown away."

WHAT THE PHYSICIANS SAID.

Of the 49 physicians who were interrogated concerning the placing of the child of an unmarried pregnant girl, 33 said that they would take care of the matter themselves; 9 said that the child could be placed, but that some one else, such as the head nurse or director of a hospital would do it; 2 said that they did not take such cases, but referred the investigator to a physician who would; 5 refused, but 2 of these said that some one at the hospital in which they worked would dispose of the child and that they themselves would attend to the confinement; one other of these 5 gave the investigator the impression that under favorable circumstances he would consent. Of the 49, there were 2 clear-cut, sincere refusals.

Not all the physicians named the fees they would accept. Those who did specified the following amounts: Two charged \$15; six, \$25; one, \$30; seven, \$50; two, from \$50 to \$100; eight, \$100; one, \$200; one, \$250; one, \$300, and three, \$500.

"All of these men," says the commission, "were cognizant of their acts; they were not ignorant; they knew that when a child is separated from its mother at birth and put into an institution it has hardly a chance of living. Yet, for a fee, they were willing to subject a child to this slow, starving death."

The thirty clergymen interviewed "included some of the

most prominent ministers in town, many of them very closely identified with social work." The investigator represented himself to be a married man whose daughter was pregnant, and he asked the ministers to help him by advising him as to the best course to pursue.

All of them, except two, agreed to do what they could to help the investigator to separate the child from the mother. Only these two spoke of the action as wrong or seemed to realize that they were aiding and abetting in the killing of an infant.

Eleven recommended one or the other of the institutions referred to in this article, others promised to get information and five said that they would make all arrangements.

Sixty-nine nurses were asked for advice regarding the placing of a child. Thirty were practical nurses, 26 graduate, 3 under-graduate and the status of 10 was unknown. Among the 69, there were only 4 who said that they did not believe in this kind of work and did not care to aid in any way the separation of mother and child; the remainder made positive suggestions regarding such separation.

Of the 111 midwives interviewed, the majority were ignorant women, knowing next to nothing about antiseptic precautions. Sixty-one offered to arrange for boarding the girl, 14 said they would take her into their own home, while others gave the impression that they would, and those who could not do this offered to arrange with some neighbor. Thirty-five of the midwives stated positively that they would do an abortion, and the investigators felt sure that under favorable circumstances nearly all of them would. Only two of the number refused to have anything to do with the matter.

Such are the facts that led the commission to entitle its study of this matter "the traffic in babies." The evil at the bottom, in its opinion, is the initial separation of the child from its mother. To meet this, the commission has drafted a bill, described as "the first measure of its kind in the world." This would make it unlawful "to separate or cause to be separated any child under six months of age from its mother for the purpose of placing such child in a foster home or institution." To place, receive or retain such a child in a foster home or institution is rendered unlawful also. The separation may be made, however, if two qualified physicians certify that it is necessary for the physical good of mother or child, if a court of competent jurisdiction orders that it be done, or if the Board of State Aid and Charities gives its consent.

Violation of the law is entitled a misdemeanor and is punishable by a fine of \$100 or a hundred days in jail, or

both. The bill has been passed by both branches of the Maryland legislature and is now awaiting Governor Harrington's signature.

SYSTEMATIZED "HUSHING UP."

In conclusion, the commission sums up its findings in these words:

"We do not attempt in this study to settle the many complex problems relating to the illegitimate; but we believe that the facts show that society's method in many instances is one of repression and virtual murder. This is a harsh word, we grant, and we would fain substitute a gentler term; but after all is said and done, that which we have recorded is virtual murder, and slow and cowardly at that. It would be far more humane to kill these babes by striking them on the head with a hammer, than to place them in institutions where four-fifths of them succumb within a few weeks to the effects of malnutrition or infectious diseases. It is a few weeks of suffering, a few weeks of going down to death by a process that is slower than the hammer but in most instances just as sure. Hedged in by our system of shame and our fabric of lies, we refuse to call it killing them; we dignify it by the softer name, the smoother term, of putting them into institutions where they will be cared for. But nearly all of them die, and many of us know that they die, and moreover many think that they should die.

All this is done in the effort to preserve a family's good name; to prevent a girl's reputation from being smirched, and to save the man in the case from facing the consequences of his act. Altogether it is a well-organized hushing up by a system of subterfuges and repressions in order that certain individuals shall not have to face openly what they have done. And aiding in this is a band of doctors, clergymen and mothers and fathers and institutions, conniving and plotting and having a hand in the killing of an absolutely helpless child,—all in the name of virtue and purity and for the sake of saving somebody's home. It is time that society should grapple with this thing and look it in the face and recognize it for the cowardly, dastardly deed that it is."

THE INDICATIONS FOR OPERATION IN GLAUCOMA.

Dr. William Campbell Posey discussed before the Wills Hospital Ophthalmic Society this subject. Secondary glaucoma was not considered, these indications applying to primary glaucoma only. He said that operations should be performed:

1. In all cases of acute and sub-acute glaucoma, and in

all chronic cases, on the manifestation of any inflammatory glaucomatous symptoms.

2. In all cases of chronic glaucoma in which there is doubt of the patient's co-operation in the persistence in the miotic treatment throughout the remainder of life. This includes practically all hospital cases and such private patients as may be of a weak and vacillating disposition.

3. In all patients with chronic glaucoma who reside at such a distance from places where proper ophthalmic care may be obtained that they are unable to report at sufficiently frequent intervals for the supervision necessary for the proper and safe carrying out of the miotic treatment, or for operation in the event that inflammatory symptoms arise.

4. In chronic patients under fifty-five years of age, when the field of vision and central vision are good, an operation upon the most affected eye is advised, miotics being employed in both the operated and the unoperated eye for the remainder of life. Operation upon the second eye should follow, if subsequent observation shows that vision is maintained better in the operated than in the unoperated eye.

5. In all cases of chronic glaucoma, without regard to age or the development of the disease, in which miotics have been given a faithful trial for at least six weeks or two months, as evidenced by the constant maintenance of pupillary contraction to almost pin-point size, and in which vision and the field of vision show progressive deterioration.

Cyclo-dialysis is preferred in all cases in which operation is demanded, if there be a hemorrhagic tendency or the field of vision is very much reduced. Iridectomy is reserved for all other cases. The trephining operation has been relinquished, as it appears to be a more dangerous procedure than iridectomy, on account of the pacification of the lens that follows in not a few cases, either immediately or remotely, after the operation. Furthermore, even in cases in which these complications do not arise, it has not been proved that the visual results after trephining are better than those obtained by a properly executed iridectomy.

In all cases not included under the five headings given above, miotics should be employed with great zeal and persistence, four times during the day. The maintenance of vision by this method does not warrant the gloomy prognosis so often rendered in cases of chronic glaucoma.

Dr. Zentmayer, discussing Dr. Posey's paper said that, considering that neither the miotic nor the operative treatment of simple glaucoma is curative, and that the non-operative treatment of any condition is preferable when it gives as good results, he thought the miotic treatment to be the treatment of choice in appropriate cases. Operations

should be advised in dispensary patients, if there are no contra-indications. Because of the likelihood of neglect when irksome treatment is to be continued over a long period of time, operation should be done on patients in all walks of life under fifty-five years of age. Dr. Zentmayer agreed with Dr. Posey in preferring iridectomy, except in the presence of marked angiosclerosis.

Dr. Schwenk stated that in his opinion, iridectomy with a Graefe knife is the best operation today. An iridectomy with a keratome is not equal to an upward-cut, according to his view. The reason for this opinion, he was not able fully to explain; but he thought it might be that the downward-cut closes the Schlemm's canal more than the upward incision. He believed that it is not the size of the iridectomy but the free, small iridectomy, that serves the end.

DIAGNOSTIC PITFALLS.

"Acute gastritis" is a rare disease in adults. As a rule appendicitis or gallstones is the correct diagnosis.

"Chronic indigestion" is usually a mistaken diagnosis, the actual condition being peptic ulcer, pulmonary tuberculosis, constipation or cancer of the colon.

"Bronchitis" usually proves to be phthisis, bronchiectasis or bronch-pneumonia at autopsy or in the outcome.

"Asthma" beginning after middle life is usually a symptom of cardiac or renal disease.

"Rheumatism" has sometimes turned out in my experience to mean: aortic aneurysm, cancer of the pleura, tabes dorsalis, osteomyelitis, spondylitis deformans, bone tuberculosis, syphilitic periostitis, lead-poisoning, morphine habit, alcoholic neuritis, trichiniasis and gonorrheal infection. "Rheumatism" is one of the most dangerous of all diagnoses of the conscientious physician.

"Cystitis" is usually a symptom, not a disease. It points to disease below the bladder (stricture, obstructing prostrate, etc.) or above it (renal tuberculosis and other renal infections) as the cause.

"Hemorrhoids" often mask cancer of the rectum.

"Unresolved pneumonia" is frequently a mistaken diagnosis, the real disease being interlobar empyema.

"Malaria" is often given as the diagnosis in cases of phthisis, hepatic syphilis, hepatic abscess and urinary infections.

"Typhoid fever" in a patient's history may mean tuberculosis or latent sepsis (septic endocarditis, suppurative nephritis, etc.)

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By B. H. Beeler, M. D., Wilmington, Del.

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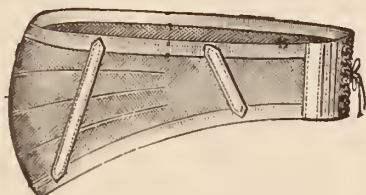
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Business Manager

DR. J. W. BASTIAN

915 Washington Street
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POLIOMYELITIS.—The epidemic is still on the stage, and it happens to be the star performer too, or rather still. The publicity given this star must delight her advertising managers, for they have attained an almost fiendish success. The producers also have good cause to rejoice over the ever-increasing popularity of their production, for while their main performance is still on Broadway, numerous road companies seem to be on tour, and making nearly as big a hit as the original show in Manhattan. The unprecedented run of this piece bids fair to last well into next season. However, predictions are dangerous, as the fickle public may change its patronage almost any day. Just what causes the popularity of the show is not known, for it contains no ingenue, has no music, and is totally lacking in comedy. Nor is it spicy, even though an army of officials are doing their utmost to suppress it. It seems to be a problem play, for as the curtain goes down on each act, the author makes the dear people feel as though he has told only half the plot, which is very elusive at times, and has a reminiscent flavor at other times—one feeling as though he has seen a similar performance before, somewhere, at some time. Be that as it may, there is no doubting its appeal to the people, for even though the

price of admission is considerably above the usual charge for a metropolitan performance, provincial old New Yorkers have fallen for it to the tune of 8,200 (!) and of these about one third finally purchased boxes, the orchestra seats not being judged near enough to the stars. Silly old New York! Some of these days when the people really see through the whole plot of the piece, they will rise up and—leave the theatre to the tender mercies of the scrub-women? Oh, no—they'll just stay and clamor for a revival by the star Prevention of his famous sketch entitled "No You Don't," and the equally famous solo by Cure, entitled, "Just Leave It to Me and I'll Fix Him." After all, these two actors are more liked by the public than this new star everybody's talking about.

Diagnosis and Treatment of Poliomyelitis In the Preparalytic Stage *

By JOHN ADAMS COLLIVER, A. B., M. D., Los Angeles.

"Infantile Paralysis" is one of our most ancient and common diseases of children, yet without paralysis a diagnosis has been practically impossible. The whole clinical picture of the preparalytic stage is that of infection or meningitis. When the symptoms are properly co-ordinated it is only then merely suggestive of poliomyelitis, and even with lumbar puncture there is some degree of doubt. During an epidemic, or when one is threatened, it is always well, however, to keep the early symptoms constantly in mind. The early time is the best time, and I believe the only one in which to begin successful treatment.

As a rule the first symptom, and often at the time overlooked, is a change in the disposition of the child, manifested either by marked irritability or indisposition to play. This irritability may be in the form of crying in the night, starting in the sleep, or crying spells without apparent cause during the day. This may be followed later by drowsiness; many times unaccountable vomiting, present alone or associated with constipation or diarrhoea. In the majority of my cases, however, during the preparalytic stage, the bowels have been loose with a tendency to tympanitis.

Practically all cases have more or less fever and loss of appetite, with intestinal disturbances, as mentioned above.

The nervous symptoms are characteristic of meningitis. The irritability becomes more pronounced and either proceeds to hypersensitiveness or drowsiness. The reflexes are more active, later somewhat sluggish, and finally entirely lost. Occasionally the exaggeration and later the absence of a knee jerk or abdominal reflex is the only suggestive sign of approaching paralysis. There is often difficulty in cerebation. The gait is many times changed. The skin becomes extremely hypersensitive so that the touch is almost painful. The child also often becomes hypersensitive to sounds. The back is not so flexible, and sitting up in bed is done with difficulty. The neck becomes somewhat stiff so that it is difficult to get the chin on the chest. Later the stiffness increases and may even go to retraction before the appearance of paralysis.

There is localized sweating of the hands, head, neck and forehead. This is no doubt due to disturbance of the sweat centers or loss of the vaso-motor control. This sweating is one of the most important early symptoms.

According to most authors, pain either in the head or limbs is a common and almost constant symptom, but it has not been my experience to find this so trustworthy. The common belief among the laity and many of the profession that "Infantile Paralysis" is preceded by pain causes parents in their great anxiety and fear of the disease to suggest this symptom. This, considered with the fact that the skin is hypersensitive, makes the report of such pain so vague and indefinite that it has caused me to practically disregard it especially among young children. If a child is old enough, however, it may complain of genuine headache or aching limbs, but it is still my impression that this symptom is exaggerated by suggestion.

In many children the symptoms above mentioned have either been overlooked or absent, and the first noticeable sign was lack of co-ordination on the part of the child. This is manifested by an inability to hold things in the hand, falling easily, knocking things over at the table, spilling water or milk in attempting to drink from the cup, difficulty in handling or holding objects, etc. These are all manifestations of changes in co-ordination.

The above symptoms are recognized by the best authorities as being characteristic of the early stages of poliomyelitis. There is none among these which is absolutely characteristic of the preparalytic stage.

During the epidemic of 1913 in Los Angeles, I made a few hundred observations of a symptom in sixteen cases which seemed absolutely characteristic of this preparalytic stage. The symptom has been of great value to me, and I am

now submitting it to you to test its merits and to solicit criticisms and case reports.

My symptom was first described in the American Medical Journal, March 15, 1913, and afterwards published in full in the California State Medical Journal in November, 1913.

NEW PREPARALYTIC SYMPTOM.

The symptom referred to is a peculiar twitching, tremulous or convulsive movement of certain groups of muscles lasting from a few seconds to less than a minute. The amplitude of vibration is greater than a tremor, not so constant and long as a convulsion, and more regular than mere twitching, yet it has some elements of all these. It usually affects a part or whole of one or more limbs, the face or jaw, but it may sometimes affect the whole body. This symptom appears from twelve hours to three days before paralysis—usually about forty-eight hours.

It may easily be overlooked in the beginning, as it usually lasts less than a second, and unless the patient is disturbed does not recur oftener than every hour or so. Later the duration of the spells lengthens to a few seconds, recurring also at shorter intervals.

The condition is often accompanied in infants by a peculiar cry similar to the hydrocephalic. At times there is a slight convulsive movement, during which time the child is apparently unconscious with eyes set for a few seconds, and then it apparently becomes perfectly normal again. This brief unconsciousness may also occur without noticeable convulsive movements. It acts thus something like a petit mal. I have observed it as a twitching of the lips with tongue running in and out and a working of jaw, preceding bulbar cases.

The phenomenon resembles that found in light cases of strychnine poisoning except that the tetanic contractions are not general and do not last for so long a time. It usually involves a set of muscles with one or more of the counter muscles not affected. There is also a similar hypersensitiveness of the skin. The least stimulation of the skin is followed by slight convulsive movements with rigidity of the arms, fingers separated and wrist flexed. When the patient turns in bed, through either an external stimulus or an effort to co-ordinate, the movements are quick and jerky, accompanied usually with slight convulsive movements of the limbs. The least noise produces in certain cases short series of convulsive movements similar to those in strychnine poisoning, only not so general.

It is not unreasonable to suppose that the presence of

the virus of poliomyelitis may bring about effects similar to those of chorea and tetany. A local chemical or other irritation of the nervous centers is produced with subsequent fatigue and later recuperation, resulting in the peculiar motor phenomenon which I have described as a preparalytic symptom.

THEORY OF NEW SYMPTOM.

According to the best authorities (Flexner, Lewis, Draper, Peabody and others) during the early stage the spinal fluid contains great quantities of the virus which disappear more or less as soon as paralysis sets in. With this there is an increase in spinal pressure which throws the ganglia and cells into a highly excited state. Some areas are attacked more than others, and we have a series of explosive contractions followed by rest similar to the artificial chemical excitation with fatigue manifested in a muscle-nerve preparation. This accounts for the local tremulous, twitching, convulsive petit mal phenomena.

It will be remembered that the virus attacks not only the nerve tissue but also the vascular system. According to Peabody, Draper and Dochez, there is a cellular exudate surrounding the vessels and pressing on the lumen. Edema with or without hemorrhages, large and small, into the cord is not uncommon. The blood supply in the cord is horizontal, while the nerve supply to a group of muscles is not all derived from the same segment. The cord may be affected in some segments while not in others. This would account for the peculiar distribution and lack of co-ordination. The results of this condition are always noticeable in convalescence, when children have had to learn to walk and to feed themselves again, and others to learn again to talk.

The only reference found to this symptom in literature is made by Wickman, Zappert and Wilbur. Wickman observed one phase of it, and but once in his many cases, while both Zappert and Wilbur observed only the muscular twitching in the limbs. I have not worked out to my satisfaction the relation of the local symptom to the paralysis.

TREATMENT.

The most consistent and efficient treatment must be begun before paralysis appears. Therefore, an early diagnosis is indispensable. It has been proven that during the early stage of poliomyelitis the spinal fluid contains the largest amount of virus (Flexner.) In addition to this the fluid is under increased pressure. I have observed the fluid as high as 210 m. m. This produces the well known classic pressure symptoms. These symptoms can be more or less relieved by

lumbar punctures. This procedure has an added value in that it dilutes the virus.

In addition to this, the early prescribing of large doses of Hexamethylendiamin (urotropin) is indicated. It is indicated because this drug is non-toxic, and is one of our best germicides. During an epidemic it should be started at the first sign of irritability, change in disposition or co-ordination, and at all times upon first indication of my symptom. Better make a mistake than wait too long. No harm can be done. Evidence of this drug appears in the spinal fluid shortly after its administration (Cushing and Crowe.) It is capable of lengthening the stage of incubation in monkeys previously inoculated, and in some instances of actually preventing paralysis (Flexner and Clark.)

The lumbar puncture dilutes and eliminates to some extent the virus, while the drug tends to destroy, or at least inhibit the growth of the organism in the spinal fluid. These two procedures in conjunction I believe are the best treatment we have today. Cases so treated in my experience were the only ones that have recovered.

Epinephrin, first used by Clark in 1912, has again been used in the present New York epidemic, but with no constant degree of success. There is no report of its administration in the preparalytic stage.

The treatment which gives greatest promise of being specific—the serum—whether of convalescent or the immunized, will certainly be more effective, the earlier begun.

It is thus very evident that if you expect to effect a cure you must make an early diagnosis and begin treatment before paralysis appears.

*From the Cal. State Jour. of Med. Sept. 1916.

ACUTE ANTERIOR POLIOMYELITIS (INFANTILE PARALYSIS)

[This article is reprinted at this time—with corrections and additions—because of the extensive outbreak of infantile paralysis in New York. The article appears in "The Prevention and Treatment of Infections," published by the American Medical Association, in 1915.]

Acute anterior poliomyelitis is an inflammation of the anterior gray matter of the spinal cord, that portion sup-

plied by the central arteries, the branches of the anterior median artery of the anterior longitudinal fissure. However, it may also affect both the white and gray matter of the brain, the intervertebral ganglia and the abdominal ganglia. Flexner believes that the route of infection is practically always by the nasal mucous membrane to the lymphatic channels of the olfactory lobes, the spinal fluid and then to the nerve tissues.

It was not definitely shown, until 1909, that this disease belonged to the infections and was contagious, although it had been long suspected. More or less isolated instances and some slight group attacks had occurred in America for many years, but we have had epidemics only since 1907, caused probably by importations of the germ from Europe where it has been long endemic. In 1909, Landsteiner and Popper reported that they had caused infantile paralysis in monkeys by inoculating them with a spinal cord emulsion obtained from a child who died from this disease. Noguchi and Flexner later reported that they had been able to cultivate a causative organism of this disease.

Recently, Flexner and his co-workers have shown that the contagium is contained in the secretions of the nose, and that undoubtedly there are carriers of this disease. It seems to be demonstrated that the infection or poison reaches the nervous system through the lymph, but probably reaches its point of activity, namely, the spinal cord, by means of the cerebrospinal fluid. In previous experiments Flexner and Amoss have shown that in all probability infection does not reach the individual from the bites of insects, as they were unable to infect monkeys by directly introducing the virus into the blood. This does not preclude the possibility of domestic animals like cats and dogs carrying the contagium and causing infection by way of the nostrils and lymph channels. It has not been shown that flies transmit the contagium, nor that the association with stables has increased the liability of infection, as has been suggested. It does not seem frequent that more than one person in the same household is affected, although such cases occur. However, in epidemics the majority of patients are likely to come from the same general region.

Frazer of New York, reports his observation on ninety cases of epidemic poliomyelitis. He found that the age varied from 9 months to 14 years. The majority of cases, especially when it is sporadic, has always occurred in young children under five years of age. The death rate is generally low, varying from 4 to 16 per cent., but the paralyses resulting are constant and frequent.

Flexner and Lewis' splendid work on this subject is reported in various numbers of The Journal. They state that the infecting agent in this disease belongs to the class of minute filterable viruses which cannot be demonstrated with certainty by means of the microscope. They also showed that spinal fluid withdrawn on the third day of the infection, before the appearance of paralysis, contains the virus which will cause infections of monkeys. Flexner, Noguchi and Amoss have recently again shown that the minute micro-organism isolated from poliomyelitis tissue is probably an etiologic factor, if not the cause, of epidemic poliomyelitis. Flexner and Lewis, also showed that the disease can be transmitted from monkey to monkey. They further showed that the germ or virus resists freezing, and therefore the disease is not stopped by cold weather. They also believe that one attack confers immunity.

Lucas found that monkeys after inoculation showed a lymphocytosis during the acute stages, but a marked and constant leukopenia. The blood at this time also showed an eosinophilia. This disturbance in the white blood count disappeared when the acute stage was over.

PREVENTION.

It is quite probable that the so-called "distemper" which at times attacks dogs and may attack horses, is really caused by this same infection. Hence, a dog affected with distemper should be isolated, and no child should be allowed to associate with it. While it has not been shown that flies will carry this disease, in all probability they may transmit the infection by their feet. Consequently, flies should be excluded by proper screens, if possible, from any animal that suffers from distemper, and certainly should be prevented from reaching an individual sick with poliomyelitis.

As early as Feb. 12, 1910, Flexner and Lewis showed that this disease was contagious by means of the secretions of the mucous membrane of the nose especially, and also of the throat, and therefore that every patient should be isolated, and that the disease should be made reportable to the boards of health.

The nurse and the family should understand that the same care must be exercised in destroying the contagium and preventing the contamination of articles and substances by the secretions of the nose and throat of a poliomyelitis patient as is so well understood must be taken in diphtheria.

As soon as a case is reported to the Board of Health the School Board should be informed (as such cases are frequently in children too young to go to school) that they may

send home from school the other children of the family, and if there is an epidemic, perhaps the other children of that tenement. The incubation period is said to vary, and may be as long as ten days, but to be safe from causing infection in others, such children should remain out of school for two weeks.

EARLY SYMPTOMS.

During an epidemic symptoms of acute infection with fever, excessive irritability and hyperesthesia should be suspected of infection with this disease.

Although a patient who is old enough may complain of headache and pains, especially in the epidemic form of the disease, still, in this as well as in the sporadic form, the onset may be so rapid that a child well the night before may be found with high fever and even with paralysis in the morning. Pain is referred generally to the muscles of the back and legs, and later to the muscles of the arms. The temperature in serious cases may be high, but the ordinary range of rectal temperature was found by Frazer to be from 101 to 103. The pulse rate is high, and is generally over 120. While pain may keep the little patient awake, and there may be a great amount of irritability and restlessness, drowsiness and heaviness was noted by Frazer in half of his cases, although there were often twitchings and jerkings during sleep. In two-thirds of his cases he found stiffness of the neck and back which is so characteristic of cerebro-spinal meningitis. The greatest tenderness is found generally in the extremities. Although this might last but one or two days, it sometimes persists for three or four weeks. The tendon reflexes are found generally absent.

The spinal fluid is clear, with a moderate increase of cells and of globulin. In the first week, the cells are more increased and the globulin scant or absent. Many of the cells may be polymorphonuclears. In the second and third weeks both the total number of cells and the proportion of polymorphonuclears are decreased and the other types of cells increased. In some cases, however, the fluid may appear normal.

Although, as just stated, paralysis may occur almost coincident with the illness in sporadic cases, in epidemic cases paralysis seems to develop most frequently on the third or fourth day. The acute illness lasts from one week to ten days. A large number of Frazer's cases showed some slight facial paralysis. If the respiratory muscles were affected, the prognosis was dire. There may be paralytic interference with urination, and defecation may be difficult from inability and of the abdominal muscles to act.

It should be remembered that many abortive forms of this disease probably occur without any paralysis, and many times without a diagnosis, and such cases may doubtless spread infection. Koplik in reviewing an epidemic of 1,200 cases, states that many atypical forms occur.

As to the extremities one or both arms may be paralyzed or one arm and one leg, or both legs, or there may be crossed arm and leg paralysis. The arm paralysis is not often complete, and the recovery is more rapid. Complete loss of response to faradism means a bad prognosis as to recovery, and atrophy will rapidly occur. If response to faradism is not completely lost, the outlook, with proper care and treatment, is good. The rapidity of recovery from paralysis, and the number that completely recover vary with the different epidemics; but the number that completely recover is lamentably small. More scientific treatment by nerve and orthopedic experts will doubtless make this percentage of complete recoveries much greater.

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Epidemic Cerebrospinal Meningitis

Its Diagnosis and Treatment

By B. H. BEELER, M. D. Wilmington, Del.

The early diagnosis of cerebrospinal meningitis is the greatest aid to lessening the mortality if proper treatment is instituted at once. In its sporadic outbreaks throughout our country we cannot say that this disease is as uncommon as we were once wont to believe. It is strikingly noticeable that this type of meningeal involvement seems to follow in the wake of our so called la grippe epidemics.

The first and most important procedure in making the diagnosis is the lumbar puncture. This is easily done and can be made without the least pain by giving a few drops of chloroform. A cloudy fluid flowing under an increase in pressure is within itself enough to justify the giving of Flexner's serum.

In its onset, meningitis is often very confusing. It is as a rule sudden, however, we may obtain a history of severe headache, especially occipital in character, with a feeling of general malaise. Of six cases seen this spring at the Delaware Hospital, four gave history of very sudden onset, while the other two had well marked prodromal symptoms. The most striking, and the one common symptom to all was headache of great severity. Failure of bowel movement for four and five days although purgatives had been given together with retention of urine was common to three of the six patients. The nervous symptoms varied in the six cases treated.

All of the patients showed a marked Kernig's sign, which was more pronounced on the right side than on the left. Hyperesthesia was not common to all, but each one showed marked tenderness along the spine. The reflexes seemed to vary from day to day, but as a rule were slightly increased. Photophobia was a symptom common to all while

the pupils were slightly dilated reacting promptly to light. Wild maniacal symptoms were noted in two cases, while the other four were quiet and cried only on movement.

Marked rigidity of the muscles of the neck, with a slight curvature of the lumbar spine was especially well marked in the children. The legs were drawn in a spastic condition, but in no case was any paralysis noted. No points of tenderness were noticed in the abdomen, but upon deep palpitation the patient would immediately complain of pain.

The skin showed spots in two of the cases. One of the skin lesions resembled the rose spots of typhoid. They were most generously distributed along the spine in the dorsal and lumbar regions. In the other case which showed skin markings the eruption was more of the bullous and wheal formation, being rather intensely red. The spots in this case were present for two days, fourth and fifth day of the disease. They were most generously distributed on the abdomen.

The leucocyte count in each case was high, running to 30,000 as a rule. There was a marked increase in the percentage of polymorphonuclear cells, both in the spinal fluid and blood. The average of the cell count in the spinal fluid was well above two hundred.

The intracellular meningococcus, a Gram negative diplococcus was discovered in each case, together with many degenerative cells.

In the cases that recovered with the serum treatment, the spinal fluid was only slightly cloudy in one, while in the other the fluid was almost pure pus, leaving a sediment of half an inch from forty c. c. of fluid.

In reporting the cases more in detail I will take three of the more interesting cases of whom I was able to obtain a fairly accurate history from members of the family.

Case No. 1.—W. L. Male, age 16 years. Family history negative. Ether worker from Carney Point. Patient's health had always been good except for chronic otitis media. His ear at times discharging pus. Patient took sick Thursday, March 9, complaining of very severe headaches; he was nauseated, vomiting repeatedly. He was extremely constipated, although purgatives had been given repeatedly for five days. From Friday night until Saturday night, a period of about 36 hours, he failed to urinate. Sunday morning the patient became delirious, irrational, being very hard to restrain. In this condition he was admitted to the hospital, Sunday, March 12, 1916. Physical examination revealed marked rigidity of the neck and spine with a positive Kernig's sign. Reflexes were somewhat exaggerated. Lungs, heart and abdomen were all negative. Mouth showed evidence of severe toxemia. Tongue dry, hard and cracked and

breath was very foul. The spinal fluid flowed under a great increase in pressure and was milky in color. The meningococcus was found in the fluid, making a complete diagnosis. Thirty c. c. Flexner's serum was given after the withdrawal of about 50 c. c. of spinal fluid. Fifteen c. c. was given again in twelve hours. Morphine was given often in order to quiet him. The patient died 36 hours after admission.

An earlier diagnosis in this case together with the giving of Flexner's serum intraspinaly would in all likelihood have saved this patient's life.

The most valuable guides in this case: Were the board-like rigidity of the whole spinal column, the high leucocyte count, and the patient's maniacal delirium.

Case No. 2.—H. G. Girl age 8 years, schoolgirl. Admitted to the hospital February 8. The child was having frequent chills but with no regularity. Temperature was always septic in behavior, being extremely irregular, ranging from 105 and 106 to subnormal. The child was treated for malaria, without response. February 25, she showed a leucocytosis of 26,000.

March 10th, patient became much worse, vomiting frequently and complaining of severe headaches. Upon examination of her nervous system a positive Kernig's sign was noticed on both sides, but was much more pronounced on the right side. The board-like rigidity of the whole spinal column with great hyperesthesia along the spine, together with the child's marked photophobia called for the lumbar puncture.

Upon first entering the canal the spinal fluid flowed under a great increase in pressure. It was cloudy but not markedly so. Fifteen c. c. of Flexner's serum was given at this time. March 11th the temperature was normal, the pulse had dropped from 160 to 104, and vomiting had entirely stopped. However, 15 c. c. of serum was repeated intraspinaly March 11th. There was no return of the symptoms after the second dose of the serum. The child was apparently well when last seen, and reports from the mother say that she is now able to play with the other children.

In obtaining the history of this case I learned from the mother that her child first complained of her head, and aching stiffness of the legs. At the onset she vomited repeatedly.

Case No. 3.—M. C. girl age 10 years. She was taken suddenly ill March 18th, complaining at this time of her head and neck. Sunday, March 21, she had a convulsion. Mother noticed that the child could not swallow, and upon taking food a convulsion ensued. Her vomiting was almost constant up to the time she was brought to the hospital. March 21, child was brought to the hospital in a delirious condition,

vomiting at this time was projectile in character, and patient had to be restrained in bed. Physical examination revealed a positive Kernig's sign. Whole spinal column was very rigid, neck being quite stiff. Pupils dilated. Patient's bowels had failed to move for three days and no urine had been passed for twenty-four hours. She was extremely toxic, mouth and tongue were very foul. This together with her cessation of urine probably led to the diagnosis of acute nephritis when obscured at her home.

The spinal fluid was very cloudy and flowed under a great increase in pressure. Daily injections of Flexner's serum was given in this case for five days before any marked change in child's condition was noticed. Proctoclysis of normal saline was continued throughout the course of the disease after thoroughal purgation had been established with calomel and salts. Little if any food was given by mouth during this period because of the great difficulty in making the child swallow. Morphine and codein were given hypodermically to keep patient quiet. After the seventh day her temperature dropped to normal. She was apparently well when discharged from the hospital.

In making the positive diagnosis of this type of meningeal involvement we have of course the several other types to differentiate. The one most often confused with the epidemic type is the tubercular involvement. Tubercular meningitis is slow both in its onset and its development while its course is equally as slow. A tubercular family history is as a rule positive and the patient afflicted with tubercular meningitis is not the robust healthy child that is so often seen with spotted fever. They have never been very healthy. They are as a rule thin, weak and anemic.

A spinal puncture will reveal a fluid more of a pale straw color, while the meningococcus is a pus producer and the fluid is more markedly cloudy. Upon microscopical examination the cell count is lower in tubercular variety, yet showing an increase over the normal cell count. The tubercular bacillus under very careful searching can be found.

In the pneumococcic meningitis the patient will in all likelihood give a history of recent pneumonia, suppurating otitis media or present lesions of the disease in the lungs. The fluid is about equally cloudy and for this reason we must rely more upon the finding of the pneumococcus in the spinal fluid.

Streptococcic meningitis is very rare as is a staphylococcic involvement. And if these germs isolated in the spinal fluid, there can be little doubt that you have a case of pyemia. However cases of the streptococcic infection have been reported and we must always bare in mind the

easy access to the meninges by way of the middle ear and nasal sinuses.

In summarizing the points of diagnosis we should always hold in mind the importance of doing a lumbar puncture in all obscure cases. A positive diagnosis cannot be made unless this is done. The high cell count of the fluid with the predominance of the polymorphonuclear cells together with the rather heavily cloudy fluid will be an aid although the specific germ cannot be found.

In view of the clinical symptoms as presented in these six cases, and as seen in as many more, severe headache, causing vomiting of rather a projectile character together with the sudden onset of the sickness stands as a most important guide.

Rigidity of the muscles of the neck with a hyperaesthesia of the whole spinal column, although more marked in some than in others, is a common finding. The positive Kernig's sign is always present and is especially well marked in the more advanced types.

The finding of the spots is not common and their absence is not significant while their presence makes your diagnosis easier.

Another symptom that is likely to prove misleading and which is very often present early in the disease is the cessation of urine for periods of 24 hours to 48 hours. This together with the extreme toxic condition of the child is very likely to lead us to believe that the kidney is wholly at fault when only secondary.

The history of extreme constipation is common and as shown in each of the six cases cited no bowel movement for four and five days was not uncommon.

In the treatment of this disease Flexner's serum has proven its worth, and the earlier the diagnosis is made and the first dose is given as in diphtheria the better your prognosis. A purulent fluid flowing under increase in pressure is enough to call for one dose and then if the meningococci are not found you can rest assured that no harm has been done.

The best method of giving the fluid is with the patient lying slightly turned on their abdomen. In this position the steady flow by the gravity method is obtained. The needle is inserted in the region of the third or fourth lumbar vertebrae, and in small children it is far easier to feel your way into the canal between the spinous processes rather than making the usual lateral puncture.

About forty c. c. of fluid can be withdrawn and in the cases which show a marked increase in pressure even more. It is far better to withdraw more fluid than is put back,

because by so doing you relieve the pressure symptoms. And very often it is of a great help in your patient's comfort to withdraw 30 to 40 c. c. although no serum is given.

The average dose of Flexner's serum is 15 c. c., but in the well advanced cases as much as 30 c. c. may be given, but it is never a wise procedure to force the fluid into the canal. The fluid should be repeated daily for at least four days unless you feel positive that you have your case well under control by less. In the two cases that recovered by this treatment at the hospital this spring one cleared up under two doses of the serum while the other remained unconscious until after the seventh.

One of the best guides to an improvement is the lessened rigidity of the neck. The patient if consciousness is clear will very often say that they feel much better after the first dose, telling you that the terrible aching of the head has gone.

As a rule the spinal fluid is perhaps slightly more cloudy after the first dose of serum than before, which is due to the severe reaction that this serum sets up and to the sloughing of the cellular exudate. The temperature may be higher and the patient seem even more restless, but the next morning you may be surprised to see your patient greet you with a bow, and be happy to learn that he has a ravishing appetite.

About the only medication that is called for is opiates of some form for these patients soon wear themselves out by tossing and tumbling if not restrained. The bromides may be administered but are more depressing. Early and thorough evacuation of the bowels with calomel and salts is called for. The cases that cannot take nourishment will as a rule take up normal saline by proctoclysis very nicely and this serves as the one best stimulant for the heart besides giving a certain amount of nourishment.

A mortality of 66 per cent. in the six cases treated does not seem to show much improvement over the old treatment. But when we stop to think that each case treated was unconscious when brought to the hospital and that in two, convulsions were rapid and well marked you can better judge of their severity. And place more credit for the recovery of two.

Doctor: "How do you feel, Colonel, when you have actually killed a man?"

Colonel: "Oh, not so bad. How do you?"—Punch.

The National Board of Medical Examiners of the United States

The need of a standard medical examining body for the whole United States and its territories (tributary thereto) has occasioned the organization of The National Board of Medical Examiners. It is a voluntary board, the members of which are selected from the medical corps of the army, the navy, and the public health service, the Federation of State Examining Boards, and other representative organizations, and the medical profession of the United States.

The aim of this Board is to establish a standard of examination and certification of graduates in medicine, through which by the co-operation of the individual Boards of Medical Examiners, the recipients of the certificates of the National Board of Medical Examiners may be recognized for licensure to practice medicine.

The policy of the Board is to conduct its examinations on a broad scientific basis of such a high yet practicable standard that the holders of its certificates will receive universal recognition.

The independent action by the Board is furthered by the financial and moral support of the Carnegie Foundation.

The original Board consisted of fifteen members, as follows, and remains unchanged, except for the loss of the founder and secretary, Dr. Rodman, who died on March 8, 1916. At a meeting June 13, 1916, Dr. W. L. Bierring, of Des Moines, Iowa, was elected to the Board.

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The permanent organization of the Board will consist of the three Surgeon-Generals and one other representative from each of the Government Medical Services, three representatives of the Federation of State Medical Examining Boards, and six members chosen at large from the medical profession by the National Board of Medical Examiners.

The official domicile of the Board is Washington, District of Columbia.

REQUIREMENTS.

Requirements for Admission to the Examination:

Satisfactory completion of

(a) *High School.* A four-year high school course.

(b) *College.* Two years of acceptable college work, including physics, chemistry, biology and a modern language.

(c) *Medical School.* Graduation from a Class "A" medical school. (American Medical Association classification.)

(d) *Hospital Training.* One year as interne in an acceptable hospital or laboratory.

The above requirements apply to graduates of medical schools in 1912 and thereafter. The Board may accept equivalent credentials in the case of graduates previous to 1912.

EXAMINATION.

The Board has been given spacious rooms in the Army Medical Museum for conducting its examinations. They will be conducted primarily by members of the Board, and will be written, oral and practical, including the examination of cases. In addition to the written examinations held in the Army Medical Museum, oral, written and laboratory examinations will be held also in the Army and Navy Medical Schools, and in the Hygienic Laboratory of the Public Health Services, these facilities, as well as the government hospitals wherein will be held clinical examinations, having been placed at the disposal of the Board for the purpose.

Credentials must be presented to the Board sufficiently early for investigation. If adequate time is not allowed for this purpose, credentials may be rejected.

The following subjects will be included:

1. *Anatomy:* Microscopic—Embryology; Histology and Organology; Neurology. Gross—Osteology; Dissection. Applied—Regional, Topographical, Surgical.

2. *Physiology:*

3. *Chemistry and Physics*: Organic. Physiological. Physics.

4. *Pathology and Bacteriology*: Bacteriology. Microscopic Pathology. Gross Pathology. Surgical Pathology.

5. *Materia Medica, Pharmacology and Therapeutics*: Materia Medica. Pharmacology. Therapeutics and Prescription Writing. Electrotherapeutics, including Radiotherapy.

6. *Medicine*: Theory and Practice. Physical Diagnosis. Laboratory Diagnosis. Diseases of Nervous System, including Psychiatry. Diseases of Children. Tropical Medicine.

7. *Surgery*: General, including Minor Surgery. Operative Surgery. Special Surgery—Ear, Nose and Throat; Eye; Genito-urinary; Orthopedics; Radiology; Skin Diseases; Syphilis and Venereal Diseases.

8. *Obstetrics and Gynecology*.

9. *Hygiene and Sanitation*: Sanitary Science; Epidemiology. Vital Statistics. State Medicine.

10. *Medical Jurisprudence*.

SUBJECT VALUES.

1. Anatomy	100
2. Physiology	75
3. Chemistry and Physics	75
4. Pathology and Bacteriology	100
5. Materia Medica, Pharmacology and Therapeutics	75
6. Medicine	200
7. Surgery	200
8. Obstetrics and Gynecology	100
9. Hygiene and Sanitation	50
10. Medical Jurisprudence	25
Total	1000

Passing grade is an average of 75 per cent.

A candidate receiving a mark below 50 per cent. in one subject or below 65 per cent. in two subjects, fails.

Candidates failing at the first examination may register for a second examination at the end of one year. A third examination will not be allowed.

It is expected that the examination will cover about one week.

No fee is charged for the examination itself, but a registration fee of five dollars will be required.

The first examination will be held in Washington, beginning October 16, 1916.

CERTIFICATION.

Candidates who have been successful in passing the examination and are approved by the Board, will be granted certificates.

This certificate is not a license to practice medicine, nor does it exempt the holders thereof from complying with the legal requirements of the states in which they desire to practice; but it will be evidence of high attainment in medical knowledge; and will, the Board believes, soon be acceptable by State Boards as evidence of qualification for licensure.

Further information and application blanks may be obtained from the secretary, Dr. J. S. Rodman, 2106 Walnut street, Philadelphia, Pa.

BIOGRAPHIC EXTRACT.

From "Who's Who in Medicine—A. D. 1935."

Theophilus Wise.—Born Horse's Neck, Nevada, 1890; A. B., University of Butte; M. A., Cape Cod College; D. Sc., Paterson University and Oklahoma College; LL. D., Canarsie College, University of Labrador, and Zion College (Zion City, Illinois.) Professor, New York Night Medical School and Manhattan Post-Graduate School for Defective Practitioners. Director of the Metropolitan Institute for the Study of Incurable Diseases; attending physician Home for Aged Babies; attending gynecologist Old Men's Home. Commander of the Imperial Eunuchs (order conferred by the ruler of Corea for services rendered a member of the royal family); corresponding member of the Imperial Institute of Science, Afghanistan; ex-Surgeon-General Siamese Navy. Organizer of the Departments of Prophylactic Venereal Education of the Chorus Girls' Union, the Commercial Travelers' League and the Bartenders' Guild. Principal contributions to surgery: Direct Drainage of the Renal Pelves as a Preliminary to the Repair of Ureteral, Vesico-Vaginal and Urethral Lesions and Aspiration of the Right Heart in Pneumonia. Principal contribution to medicine: Direct Hypodermic Therapy of the Cardiac Muscle. Other important contributions: Axial Torsion of the Lung and its Clinical Similarity to Phthisis Pulmonalis: What Shall We Do With the Cretinoid Type of Medical Practitioner (an address, Sag Harbor Academy of Medicine;) Diagnostic Jiu-Jitsu; Vaginal Vagaries; How to Get the Ovaries Every Time; Twenty Years in the Vagina; Fetuses That Pass in the Night (a

poem); The Common Bedbug the Intermediate Host of the Gonococcus; The Utilization of the Principle of Vacuum-Cleaning in the Curative Treatment of Specific Urethritis; Silver Shreds Among the Gold and Other Diagnostic Criteria; Definition of the Legitimate Field of the Author's Anti-Pregnancy Serum; The Psychiatry of the Book of Revelation; A Study of the Phobias, with Especial Reference to the Fear of Money. Editor of The Chancre, a Journal of Syphilization. Politics: Independent Progressive. Club: Ananias. Recreation: Religion; also drives a Woolworth five.

NAVAL EXAMINATIONS.

The next examination for appointment in the Medical Corps of the Navy will be held on or about October 23, 1916, at Washington, D. C., Boston, Mass., New York, N. Y., Philadelphia, Pa., Norfolk, Va., Charleston, S. C., Great Lakes (Chicago,) Ill., Mare Island, Cal., and Puget Sound, Wash.

Applicants must be citizens of the United States and must submit satisfactory evidence of preliminary education and medical education.

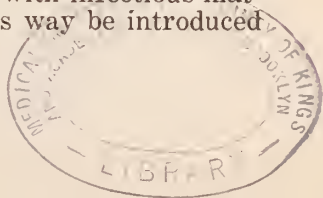
The first stage of the examination is for appointment as assistant surgeon in the Medical Reserve Corps, and embraces the following subjects: (a) anatomy, (b) physiology, (c) materia medica and therapeutics, (d) general medicine, (e) general surgery, (f) obstetrics.

The successful candidate then attends the course of instruction at the Naval Medical School. During this course he receives a salary of \$2,000 per annum, with allowances for quarters, heat and light, and at the end of the course, if he successfully passes an examination in the subjects taught in the school, he is commissioned an assistant surgeon in the navy to fill a vacancy.

Full information with regard to the physical and professional examinations, with instructions how to submit formal application, may be obtained by addressing the Surgeon-General of the Navy, Navy Department, Washington, D. C.

CLEAN HANDS.

Disease germs lead a hand to mouth existence. If the human race would learn to keep the unwashed hand away from the mouth many human diseases would be greatly diminished. We handle infectious matter more or less constantly and we continually carry the hands to the mouth. If the hand has recently been in contact with infectious matter the germs of the disease may in this way be introduced



into the body. Many persons wet their fingers with saliva before counting money, turning the pages of a book, or performing similar acts. In this case the process is reversed, the infection being carried to the object handled, there to await carriage to the mouth of some other careless person. In view of these facts the U. S. Public Health Service has formulated the following simple rules of personal hygiene and recommends their adoption by every person in the United States.

Wash the hands immediately

Before eating.

Before handling, preparing or serving food.

After using the toilet.

After attending the sick, and

After handling anything dirty.

THE EUGENIST TO HIS LOVE.

Away! away! for I must break with thee!

Not that I love thee less than heretofore;

But, by the eugenistic theory,

We dare not coo nor cuddle any more.

Tempt me no more thy luscious lips to taste;

I love thee madly and I might give in.

Ah, love, wert thou but larger in the waist—

But as it is, the book says thou'rt too thin.

Tempt me no more to rest within thy arms!

My breaking heart might yield to love so tender.

Shut, shut thy pleading eyes! Veil all thy charms!

I love thee!—but alas! thou art too slender.

Farewell! farewell! mine angel that thou art!

Mine cheek grows cold; mine eyes with tears are dim.

A word, a glance—I'd crush thee to my heart!

O speak not! look not! for thou art too slim.

Away! away! yet leave the hope with me

That years increasing yield thee some increase.

Leave yet the hope that some day I shall see

My love, my life, a little more obese.

—Henry Sticker.

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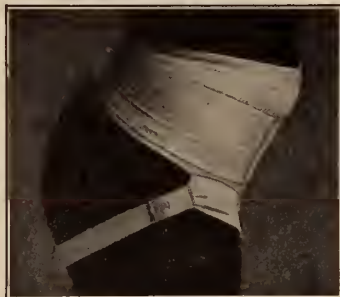
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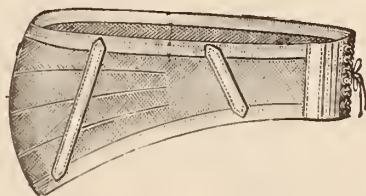
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Editor

DR. W. EDWIN BIRD

907 Delaware Ave.

Wilmington, Del.

Business Manager

DR. J. W. BASTIAN

915 Washington Street

Wilmington, Del.

Assistant Editors

DR. G. I. MCKELWAY

Dover, Del.

DR. T. H. DAVIES,

Farnhurst, Del.

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AUGUST, 1916

No. 9

JUST A LITTLE FASTER.—We are again compelled to draw attention to the fact that the annual meeting of the State Medical Society is scarcely two weeks off, and the number of papers so far volunteered has not reached our expectations—no, not by a whole lot. Here we call once more upon our members to help us out of what might prove an embarrassing situation by notifying Dr. Forrest, the State Secretary, that other papers are in preparation, and will be read at Milford, October 10. It is pretty nearly time Delaware was placed on the medical map, and it's also time for us to realize that the Lord won't help us do it till we begin to help ourselves. Come on, boys, pass in the papers! There will be a good crowd there to hear you.

HEADS IT IS, TAILS IT ISN'T.—Anent the recent discussion in the Wilmington dailies concerning a certain case of poliomyelitis, in which the threat to sue the city for an alleged wrongfully imposed quarantine was nearly made, we think it well to remind ourselves that occasionally fools rush in where angels fear to tread, which is equivalent to saying that sometimes a judge throws a case out of court because there is no case. We must never forget that in the presence

of an epidemic, all suspicious cases, even though they later prove to be free of the epidemic disease, should be subjected to every precaution. This the local Board of Health wished to do in this particular case, and *did* do because it *had* to. When talking about suits and damages, do not forget that the Board has the law behind it, and should it do less than use its utmost efforts to protect the public at large, it is derelict in its duty, and subject to impeachment. Whether the case in point was one of poliomyelitis or not (for several competent physicians made diagnoses at variance) this talk about suing the Board and the city is mere piffle, and would have absolutely no standing in a court for the simple reason that the Board did its duty, as required by law. The Board has its troubles, and makes its mistakes, but after all it is our legally constituted protector of the public health, and it has the law behind it. Under the circumstances, to talk of suits constitutes a conspiracy against the public weal, and we are indeed glad that this threat emanated from laymen and not from members of our profession.

KERATITIS: A Case Report

By ROBERT B. HOPKINS, M. D., Milton, Del.

Three days after receiving a contusion of retina with a piece of glass, my patient called with the following conditions: An ulcer on central part of cornea, the size of a large pin-head. In three days it had spread until it covered one-third of the cornea. It had taken on a semi-gangrenous form, the conjunctiva was highly congested, and the iris drawn down to a pin-point.

Treatment—Atrophia, one gr. to two drams of aqua destillata, instilled into the eye every hour for twenty-four hours. This failed to dilate the pupil. On her second visit, I placed in the eye a small portion of powdered atrophina sulphate and in one-half an hour the pupil was fully dilated. A blister was placed on the temple and a solution of the following was instilled in the eye every two hours—R Acidi Boracici Gr. X, Aqua Destillata oz. 1 also Adrenalin: 1000, alternately every hour. On her third visit the ulcer was thoroughly cauterized with Argent nit. Gr. xx to one ounce of Aqua destillata. The case seemed a desperate one, and looked as though the eye would be lost. I am pleased to re-

port that the ulcer has entirely healed, leaving only a small opacity which I think will in time disappear.

The sight is gradually returning. I have never read of this use of adrenalin in Keratitis, although I have used it several times. It certainly relieves the congestion of the conjunctiva, and aside from this whether it has a marked influence on an ulcerated surface, others of more experience may testify. I attribute to the cauterizing effect of the silver nitrate, the arrest of the ulceration. After the slough detached itself, it left a healthy surface. Only one application of the silver solution was made. These cases are usually of a desperate nature especially in an impoverished patient, and when one meets with favorable results, he feels constrained to offer his treatment for the benefit of others. I may add, applications of hot water were used throughout the case.

What Stomach Symtoms Justify Surgical Intervention*

By MARTIN B. TINKER, M. D., Ithaca, N. Y.

A reduction of the present high death rate from stomach cancer and stomach or duodenal ulcer can be accomplished only when agreement can be reached between internists and surgeons as to the indications for operation. I bring this question before you not because I believe that I, or any one else, is in a position to settle definitely just what stomach symptoms justify surgical intervention, but because it is only possible to reach an approximate solution of many of our problems by a study of the results of others and comparison with our personal experience. Stomach symptoms result from such a wide variety of diseased conditions that the situation is at first confusing.

Elimination of Non-surgical Cases. Our first effort should be to eliminate non-surgical conditions. A reasonably careful routine examination usually suffices for most cases presenting stomach symptoms which do not justify surgical intervention. There would seem to be no excuse for exploration of the stomach in case of gastric crises of locomotor ataxia; the severe nausea and vomiting usually accompanied with headache from eye strain; the vomiting of blood and other stomach symptoms of cirrhosis of the liver;

*Reprinted from New York State Journal of Medicine, December, 1915.

or in the stomach upset from advanced kidney or heart lesions. There remain, however, a considerable number of non-surgical cases in which the stomach symptoms are a prominent feature and in which definite diagnosis is more difficult. The widespread attention now given to abdominal ptosis has sufficiently demonstrated the importance of this condition and its effect on digestion, as well as futility of operation in many cases. Certain abdominal aneurysms and chronic nervous conditions also offer great difficulties. In discussing this subject I shall refer to symptoms, in the wider meaning of the word, as used in most of our text books referring to all evidences of disease.

Importance of Case History. Taking, first, the subjective symptoms of stomach trouble. There is a very general agreement among all men of experience as to the importance of the clinical history and particularly the early history of these cases. Frequently at the onset of trouble the symptoms are clear and distinctive, while later the clinical picture is obscured because of the symptoms resulting from adhesions, extensive involvement of surrounding organs and impairment of general health. Common to all the chronic dyspeptic troubles, such as gallstones, appendicitis and various intra-abdominal forms of cancer, are complaints of pain, vomiting, gas and distention, burning sensations and eructation of sour or bitter material. In a number of these cases it may be possible to get the early history of pain localized in the region of the appendix or under the right costal border, more or less distinctive of appendix or bile tract involvement, while in the stomach or duodenum cases the pain is more commonly located in the epigastrium. Pain is perhaps the earliest and most persistent of symptoms. It is frequently described as gnawing or boring in character. Whatever its location or character, severe abdominal pain and persistent abdominal pain is usually an indication of serious trouble. The history of relief of ulcer pain by taking food has been emphasized by a number of writers of experience, and I believe all will agree as to the value of "hunger pain" when it is possible to get a definite history of this symptom. Gas and distention are complained of by most cancer and many ulcer patients, and cause extreme distress later in many cases. Vomiting also occurs in these partly obstructed cases and in the irritative stage with ulcer. Vomiting of blood is usually considered a diagnostic symptom, but perhaps is classed more properly by Moynihan as a late complication. Periodicity is common to bile tract difficulties as well as ulcer, with intervals of almost perfect relief and little impairment of health until extensive involvement has occurred. The prolonged and fluctuating course of

chronic ulcer, with intervals of partial or perfect health; and the history of a steady downward course in cancer of the stomach are very suggestive.

Examination of the Abdomen early in the disease may give valuable information. Tenderness on pressure over the ulcer, usually in the epigastrium in the vicinity of the pylorus, when present, is very suggestive, though not nearly as constant as are the points of tenderness and pain over the appendix and gall-bladder. Later on visible peristalsis may show beginning of obstruction from developing cancer or adhesions about chronic ulcer. The cases of cancer in which definite tumor is present Czerny many years ago pronounced inoperable, and this still holds good in the great majority, but some small movable tumors are readily operable, and occasionally a mass of adhesions about chronic ulcer may be mistaken for cancer, and such possibilities of mistakes justify exploration in doubtful cases. The general appearance is also suggestive. The ulcer patient, however much reduced in nutrition and nervously upset, is not the cachectic, pale, depressed and weakened patient so often seen with cancer.

Gastric Contents Analysis. Although there is general agreement that we cannot depend upon gastric contents analysis for either a positive or negative diagnosis, it seems to deserve a place among our methods of investigation. Reports from a number of surgical clinics show that chronic ulcer of the stomach and duodenum may be present in the absence of free hydrochloric acid. That free hydrochloric acid is sometimes present in case of cancer (Osler and McCrae, 7 out of 87 cases; Mayo Clinic, 70 out of 150.) That blood both by stomach tests and examination of feces is not found in ulcer cases as frequently as generally supposed (Mayo Clinic, 49 out of 250 cases; Peck, 43%; my own cases just 50%.) That blood is not present in more than about two-thirds of cases of stomach cancer (Mayo Clinic, 53%; Osler and McCrea, 30%; personal, 60%.) To add to the confusion, blood is occasionally found with gallstones and appendicitis. (Brewer and Cole give gastric contents analyses in 5 out of 11 appendix and bile tract cases with blood present in 2; Mayo Clinic, blood in gastric contents analyses, 15% in 100 gallstones and appendix cases. In my own cases blood was present in 1 out of 4 gall-bladder and appendix cases with pronounced stomach symptoms.) However, while operative findings indicate that examination for free hydrochloric acid, total acidity and the presence of blood do not give so definite results as some suppose, the gastric contents analysis is frequently very helpful. There is general agreement that hyperacidity, with repeated appearance of blood in vomitus and stools, strongly suggests ulcer

of duodenum of stomach (a single hemorrhage is generally due to other causes;) also that the presence of lactic acid, absence of HCl, coffee ground blood and occult blood in the stools, any or all of these when persistent are strong evidence of cancer.

X-ray Study of Abdominal Conditions. There is a constantly growing belief in the value of x-ray study of the stomach, among all who are interested in this work. In a recent paper by Brewer and Cole, 27 case histories are given and in 22 cases a definite diagnosis was made by the Roentgen method, which was proved to be correct in 20 instances. In 11 cases the diagnosis was negative as regards the presence of a gastric or duodenal lesion, although the clinical history so strongly suggested ulcer or carcinoma as to justify operation. Such examination should make it possible to eliminate nearly all cases in which symptoms are caused by ptosis and definitely locate the lesion in a number of cases in which the symptoms are caused by obstruction not in the neighborhood of the stomach. The x-ray gives accurate information regarding the size, position and shape of the stomach, the activity of peristalsis and time of emptying; the contour of the pylorus, whether clear cut on both surfaces; the sphincter, about three-sixteenths of an inch wide, or irregular in contour and wider than normal; the pyloric cap, whether symmetrical and corresponding in size and contour with the pars pylorica, or visible, deformed or spasmodically contracted. While it does not always give a positive diagnosis, almost all who are familiar with the work are agreed that it gives more accurate information than any other method now employed. My own experience corresponds so closely with that of Brewer and Cole, previously mentioned, that I will quote Dr. Brewer's operative findings. In 27 cases the symptoms were sufficiently definite to lead to the suspicion that there was an organic lesion of the stomach or duodenum. In 11 cases the x-ray gave a negative diagnosis, but the clinical history seemed to justify operation. In these 27 cases were found: Cancer of the stomach, 3; ulcer of the duodenum, 7; syphilis of the stomach, 2; or a total of 12 out of 27 in which the lesion was located in the stomach or duodenum. In the remaining 15 cases were found: Chronic appendicitis, 9; lesions of the gall-bladder, 2; gall-stone obstructing duodenum, 1; tuberculous glands causing obstruction, 1; adhesion of the colon causing obstruction, 1; no lesion for which surgical intervention seemed necessary, 1. That is, in only 12 out of 27 suspicious cases the stomach or duodenum were at fault, but in 26 out of 27, lesions of sufficient gravity were found to account for the stomach

symptoms and appropriate surgery was used for the relief of these symptoms.

In a recent series of 29 personal cases in which symptoms referred to the stomach were the most prominent features, the following conditions were found: Cancer of the stomach, 4; ulcer of the stomach, 2; cancer of the duodenum third part, 1; ulcer of the duodenum, 9; perforating ulcer of the duodenum, 1; cancer of the transverse colon, near stomach, 2; chronic inflammation of bile tract, 3; chronic appendicitis, 3; tuberculosis of the cecum, 1; movable kidney, 3 (in one of the movable kidney cases the displaced kidney was adherent directly over the duodenum.) It does not seem important from the patient's standpoint whether the stomach symptoms are caused by stomach lesions so long as a removable cause is located, and it seems very doubtful whether it will ever be possible to arrive at a positive diagnosis in many of these cases in which organs so closely related anatomically and functionally are involved.

The present situation seems especially unfortunate as regards stomach cancer. Writing fifteen years ago, Osler and McCrea say: "The prospects will be better when we study every case of stomach trouble (other than transient) between the ages of forty and sixty, with a view to the possibility of malignant disease. If we hear that a woman of uncertain age complains of a bloody discharge from the uterus, the possibility of malignant disease is at once thought of; but how many of us consider a like grave possibility when a patient of the same age complains of stomach symptoms, perhaps with a moderately sudden onset? With the graver conditions kept in mind, they are less apt to be overlooked in the diagnosis. In other obscure abdominal disorders operation is a common procedure—why not in gastric conditions? The risk is comparatively slight, and is much less than that of an undiagnosed neoplasm. In a suspected case when under treatment there is no improvement in a few weeks, an exploratory operation is justifiable."

A study of the results of the most experienced workers in this field leads to the conclusion that surgical intervention is justified in a large number of cases on the basis of a carefully taken history alone. When the history brings out repeated attacks of indigestion with intervals of good health, severe epigastric pain, frequent vomiting, hunger pain and relief by taking food, unrelieved by a reasonable number of weeks of medical treatment, operation seems justified. If, in addition to this, the x-ray shows delay in emptying the stomach from partial obstruction, deposits of bismuth in chronic perforated ulcer or great irregularity in stomach contour, the indication seems still stronger. If gastric con-

tents analysis shows hyperacidity in ulcer cases or absence of free hydrochloric acid with lactic acid in cancer cases, this is also strong confirmatory evidence. Blood, though not so frequently present, either vomited or obtained microscopically or shown as occult blood in the stools, is also valuable evidence.

While it may be impossible to arrive at a positive diagnosis in many of these cases, it is almost always possible, I believe, to say that serious trouble is present inside the abdomen, that the symptoms are of sufficient gravity to justify surgical intervention. Almost always it will be possible to determine with some degree of certainty whether the stomach and duodenum are at fault or whether the stomach symptoms are caused by lesions elsewhere in the abdomen. All modern means of diagnosis should be employed and the lesion located as definitely as possible so that in the majority of cases the operation is not really exploratory, but we may be able to attack the lesion causing the symptoms without undue handling of the intestines or manipulation inside the abdominal cavity.

HOW CAN MEMBERS BE INDUCED TO ATTEND MEETINGS?

Dr. Harry A. Reese, secretary of the Cochise County (Ariz.) Medical Society, lists inducements for attendance as follows:

"Man wants but little here below."

Medical men must want a society and want it with an intensity which will cause them to drive miles after night; sometimes over bad roads and during inclement weather; often miss pay calls; stay up several hours later than their usual bedtime, even when rest is sadly needed, and the next day turn a deaf ear to the complaints of their "friends" because they were not at home when called.

The regular attendant at our meetings must be willing to sacrifice many things. What benefit can we offer him in return?

1. Inducement No. 1. The most convenient meeting place.
2. The best roads which it is possible for our united efforts to obtain.
3. A program which is worth while to listen to, or bet-

ter still, one which he has helped along by the careful preparation of a paper or case report or the presentation of an instructive clinical or pathological specimen.

A program worth while, or a course of study which will call for his best efforts.

The program should be prepared a few months in advance, and having been prepared should have the loyal support of every worthy member.

"A program worth while" from the writer's viewpoint is one which instructs, entertains, excites a desire to know more about the subjects under discussion, one which stimulates to better work, and to original investigation.

4. A light lunch and a cup of coffee. A man with a full stomach is better natured than one with an "aching void."

5. Goodfellowship, a cheery word, an expression of appreciation, professional courtesy, all have their places in the make-up of a good medical society. Some good men absent themselves from our meetings because they do not want to have anything to do "with the other fellow." Quarrels and bickerings, cliques and clans will largely destroy the efficiency of any medical meeting. For the sake of our own peace, and the welfare of our fellow men, let us resolve to forgive the past; to forget the faults of others and remember our own. Let us cultivate a happy disposition and court friendship. Let us be far-sighted enough to see that every "knock" is a "boost" for the other fellow, and that it pays us in dollars and cents to have no enemies.

Just now, let us comprehend more fully than we have ever before that the law of compensation decrees that every man gets about what is coming to him.

Dr. Bess Puett, secretary of the Gaston County (N. C.) Medical Society, recounts the experience of that organization:

Our county medical society is composed of physicians, twenty-six in number, who practice mostly in the country and small towns. We have a regular time and place for monthly meetings. The place of meeting is centrally located and is easily reached by the majority of the members. Several days before each meeting they are reminded of the same by a postcard from the secretary containing the date of meeting, the place and also the program.

At the meetings we have scientific papers, which are discussed by the members, and also clinical cases when possible. Recently we have been appointing two physicians to write papers and ask four other physicians to discuss the same before it is opened to the society for discussion. The appointing of four physicians, two to discuss each paper,

and asking several members to bring or report some interesting clinical case has just been tried for the past few months, but it seems to be helping to increase our attendance very much. This plan gets at least eight physicians to prepare something for each meeting whereas before this was adopted only two physicians were interested in preparing articles for the program. The interest in our society is increasing and we hope within the next few months to have well attended meetings. Just a few words from the secretary on the "notice card" to delinquent members will often bring them to the meetings.

Curing the Incurable

By ROBERT J. FOLONIE, LL. B., Chicago, Ill.

A great activity is discernible in many states of the Union for revoking licenses of quacks and impostors in the medical profession. One of the effective means is to authorize revocation of license when promises are made to cure diseases generally recognized as incurable. This cannot fall gravely on a legitimate practitioner, for he does not warrant a cure in any event; he merely gives of his best and promises fidelity and skill, but not omniscience or omnipotence. In Colorado a statute authorizing revocation on the assurance of cure of a generally conceded incurable disease was held void as too uncertain and indefinite. Oklahoma holds to the contrary and with good sense construes its law to apply not to violations of ethics, but to those practices commonly deemed immoral and against conscience by reputable physicians and laymen alike.

In this view the question is whether considering the disease and the state it has reached it is at the time "incurable." If a physician promises a cure and accepts a fee, when there is a consensus of opinion that the diseased condition presents an incurable condition, he is taking money under false pretenses.

The extension of power for revocation of licenses by legislative action in Illinois makes this a pertinent subject of discussion and may present a subject for consideration by our lawmakers. I am impressed that it points a practical means of eliminating the charlatan from the field of medicine.

ANTHRAX*

By JOHN PALMER, JR., M. D., Wilmington, Delaware.

It may seem strange that I have selected the title of Anthrax for a paper to be read before this Society in that it is comparatively a rare disease, but it has been my fortune to have in the last eight years attended over 42 cases and having seen some cases that were improperly diagnosed, improperly treated at the beginning I thought it might be well for a paper of this kind to be read to enlighten us a little bit more.

Anthrax, commonly called Malignant Pustule, which is a misnomer in that there is no pustule about it; Wool-sorter's Disease; splenic fever; carbon. It is an acute infectious disease, usually infecting the cutaneous and cellular tissues, never the deeper underlying tissues and originates in a little pimple. There is itching and uneasiness, and the gradual formation of a small papule soon becoming vesicular, terminating in gangrene, its cause being the bacillus anthracis. The disease is met in various sections of the union and the description that follows, with slight exception, is as I have found it in Wilmington. The disease is most common upon the face and neck, although I have found it upon the back and forehead. Persons working among hides and any of the processes from the green to the finished product may get it. Hides retain the poisonous spores for sometime. Anthrax may be acquired by infection through the outer covering of the body or through the respiratory or digestive tracts. The intact epidermis is a complete protection against the germ. It can enter only by inoculation, being rubbed in by the fingers. The pimple is usually regarded as harmless by the patient, who frequently presses out the contents, thereby spreading the infection. The bacillus anthracis is a rod-shaped, non-motile organism, was first discovered in 1849, isolated in 1863 and conclusively proven in 1876 to be the cause of this disease. The bacteria are obtained from the blood, sometimes from the feces and the dried blood of animals dying from anthrax. The bacilli or spores retain their vitality for a long time. The bacillus is killed by a temperature of 230 degrees F., but the spores are among the most resistant known. They remain dried up for several

*Read before the Delaware State Medical Society, October, 1915.

years and then may be brought for further development if placed with favorable conditions of heat and moisture. If spores they develop into bacilli and there is room to doubt that man and animals are affected by spores as well as bacilli. The local changes are due to blocking up of capillaries which produces abundant inflammatory exudation. The period of invasion of the disease is very brief, not exceeding a few hours. The first thing the patient notices is a small reddish point attended by itching, this pimple spreading in size, is followed by a little vesicle filled with turbid serum. Around the vesicle is a distinct areola like smallpox, hard and circumscribed, allowing itself to be raised up from the adjacent structures. It becomes more and more prominent and at length acquires a base of the diameter of a dollar. This gradually sloughs from the surrounding tissues leaving a foul ulcer which gradually heals, leaving little deformity as compared with the amount of destruction of tissue. When the disease affects the face and neck, the parts become enormously swollen, the face and neck becoming two or three times its normal size, giving rise to hideous distortion and rendering it impossible to distinguish one feature from another. This edema is unlike anything I have ever seen in any other disease. The lips are distended like bladders, the cheeks puffed out and the natural line of demarkation between the face and neck is lost. Deglutition and respiration are extremely difficult, sometimes followed by spasm. Occasionally the lymph glands and nodes swell and become painful but not nearly as large as would be expected. The constitutional symptoms are those of malaise and foreboding of evil. Presently fever sets in, accompanied by rigors and then the patient sinks into a low typhoid delirium, attended by murmuring and restlessness. Usually if the patient lives over three days he will recover. The patient's habits and state of health at the time of infection have an important bearing upon the course of the case. Most of the patients I have seen have been under the influence of drink which lessens their resistance. The edematous form is more dangerous. In this form there is the appearance of edema spreading in all directions with discoloration of the skin and without the sharp margin which is characteristic of erysipelas. It has been said that all cases of internal anthrax die, while one-fourth die when it attacks the head and trunk, one-eighth in the upper extremity and one-twentieth where the lower extremities are involved. After eating anthrax flesh there is pain, vomiting, diarrhea, the patient is markedly dyspnoeic and cyanotic. Death is preceded by collapse. Diagnosis, as a rule taking a pimple with a vesicle about it and the patient a worker in hides there should be no

trouble about diagnosis. There is one thing you may be certain of if you cut into one of those pimples and find pus it is not anthrax. It may be a carbuncle. Pus does not form unless there is a mixed infection.

Carbuncle is similar to anthrax but the vesicles are wanting. The recognition of internal anthrax is very difficult but if the bacillus is found the diagnosis is positive. I cannot say that having had anthrax makes immune because most of the patients I have found have gone into other work, but I have had one patient who had anthrax on the back of the neck about the same time the first one was getting well, a second attack developed whether from new infection or the first I cannot tell. The second affected him more seriously than the first, though not interfering with the first.

As to treatment, the part is thoroughly but gently washed with 1-2000 bichlorid solution, drying it well, then swabbing it with a 10 per cent. tincture of iodine and applying some alkaline. This is repeated daily for several days until the slough has come away. It takes about two or three weeks for an ulcer to heal and with very little scar as compared with the tissues involved. It has been suggested that the tissues be dissected out and the wound cauterized with carbolic acid. If systematic treatment is necessary other than cleaning out the bowels, others require strychnia and alcoholic stimulants. If the trachea becomes much involved nothing will prevent death by suffocation. Tracheotomy might be tried though the swelling proceeds with great rapidity. It has been my experience if the vesicles are kept unruptured the better for the patient. The fatal cases I have seen were those in which the vesicles had been ruptured. Of late years an antitoxin serum has been introduced. As yet there has not been very much success from it, but it is still recommended to be tried. In one case I used it the patient died from suffocation, I think before the serum could have done any good. In some of our earlier cases we used to inject the permanganate of potash about 16 grains to the ounce. The patients got well, but it left a very painful sore, so much so that we have discontinued it. I have not dissected the pimple out because if you do it seems to make more reinfection. It might be feasible to dissect with sound margins of skin. The more virulent the infection the greater the danger of opening the lymph vessels to the microbe. Since I have written this paper I notice a little article speaking of the use of iodine. It seems iodine elicits the defensive reaction aside from its anti-microbic powers. They were experimenting on anthrax germs. A deep wound was infected with anthrax germs and then

treated with iodine and two-thirds were saved from death.

DISCUSSION.

Dr. Joseph P. Wales, Wilmington—It is important, as Dr. Palmer said, and particular emphasis should be laid on it, the absolute letting alone and not disturbing the vesicle in any shape or form, and secondly, whether it is wise to incise around and remove the vesicle, the danger being that if it does not get well outside the area of infection when you open the blood vessels and lymphatics you will get worse reinfection in the tissues around it. I can't help feeling in the local treatment of the vesicle injections of iodine would be efficacious around it. I do not know that from experience. I should try it. It opens a new field. I do not understand how ten or fifteen years ago we got along without iodine in surgery.

Dr. Joseph W. Bastian, Wilmington—I had a slight experience with anthrax and there is a point I think we might emphasize in Dr. Palmer's paper and that is the early diagnosis. It will mislead the majority of us if we are not on our guard. The pimple is such an innocent looking little fellow and as it develops, the surrounding tissue, if I remember correctly, is slightly lighter in color than the healthy tissue, which, of course, is contrary to what we get in erysipelas. In one case I was entirely misled the first day I saw the lesion and made a rather neat incision and got nothing but a slight amount of serum. I saw the case one day after that and the man got well in spite of my incision. I suspected after making the incision and getting no pus that it was anthrax. In Wilmington where we have a great number of morocco factories, there is much more anthrax than you find in many other parts of the country and it is a condition which is fatal so often that it is exceedingly important from two points: from the fact that if you do not meddle with it too much the patient is liable to get well, and if you do meddle with it you are going to spread your infection and the possibility of infecting other people.

Dr. E. S. Dwight, Smyrna—I would like to ask Dr. Palmer if he has ever tried freezing in anthrax. A great many years ago I read a suggestion of freezing.

Dr. John Palmer, Jr., Wilmington—I never tried freezing. It has been suggested as to what treatment the hides might be put through to kill the anthrax bacillus. There is nothing known that will absolutely make the hides immune. After any processes that they put them through they are bound to come across hides that will develop anthrax.

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By Victor Robinson, New York, N. Y.

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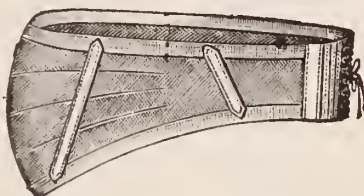
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*Osler states: In 183,526 cases of diphtheria treated in 150 cities previous to the use of antitoxin, the mortality was 38.4. Since the introduction of the antitoxin treatment, records of 132,548 cases show a mortality of 14.6; and leaving out those cases which did not receive serum injection, the mortality is reduced to 9.8. It is estimated that without antitoxin there would be, in the United States, over 64,000 deaths yearly from diphtheria, while the mortality has been reduced by the use of antitoxin to less than 15,000 in the United States alone. This means a saving of over 49,000 lives a year.

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Business Manager

DR. J. W. BASTIAN

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WOMAN IN MEDICINE.—The popular idea that the entrance of women into the medical fields is a strictly modern phenomenon is entirely fallacious. We have always had the woman physician with us, and perhaps we always shall. It is our impression that the first woman physician was Eve herself—we doubt indeed if Adam interested himself very much with Cain or Abel when they had the colic. So, with the illustrious example of the Primal mother constantly before her, small wonder is it that woman from that day to this, has practiced the healing arts. When Noah's three sons and their wives were all that remained after the deluge, again woman became probably the sole practitioner.

From this time till within the past century, woman's position in medicine progressively declined, though in all the Eastern countries there were periods when she was prominent as a physician. She practiced in ancient Egypt centuries before Christ, and in Indo-China almost as long. One Cleopatra wrote a book on cosmetics, that department of medicine now called dermatology. The evidence does not point to the famous queen as being the same Cleopatra, though, if the coins some of the modern numismatists have collected

tell the truth, Cleo, instead of being a beauty, was positively ugly, and surely needed to study cosmetics.

Among the aborigines of Africa and Polynesia woman practiced medicine in connection with her functions as priestess. In Greece and Rome she at times attained great eminence. Metadora was the authoress of a Greek manuscript of medicine, and Plato in his "Republic" insisted that women should have the same education and training as men.

Galen quotes certain prescriptions from women physicians, some having attained such eminence that monuments and tombs had been erected to them. Among these are Basila, Theckla, Originia and Ospasia of Miletus, who, because the Athenian law prohibited marriage between a citizen and a foreigner, became the mistress of Pericles, and of whom Socrates said he was proud to be a disciple. Galen was a Greek but practiced in Rome in the first century after Christ, during which period also practiced Victoria, who attained sufficient prominence to have a treatise on the diseases of women dedicated to her. Leoparda and Medica, while heathen, also came in for no small degree of fame. Then followed, as was to be expected, after the dawn of the Christian era, many Christian women physicians, notable among whom are Theodosia and St. Nicerata, the former being like her son, St. Broconius, one of the earliest martyrs to a devotion to medicine and surgery. St. Nicerata, who practiced in Constantinople during the reign of Emperor Orcodius (A. D. 395-408) is credited with curing St. John Chrysostom of a serious disease. Other shining lights in Italy were Allesandra Gilion, of the University of Naples, while at the University of Salerno in the eleventh century, women reached their highest recognition in medicine, an entire department being devoted to them, with women professors, whose teachings were eagerly sought by learned men and carried to other countries. In the Southern provinces of Italy it was the rule to have women physicians for women. In the thirteenth century Pope Benedict's sister, a Benedictine nun, founded a convent devoted to the study of medicine by women, with women physicians as teachers. This was probably the first women's medical college in the world.

In Germany little is known of woman's status in medicine till the eleventh century, when we find Horswitha, an abbess of the Odelian Cloister at Hohenberg, who wrote the "Liber Simplicius Medicinæ," as well as "Liber Compositæ Medicinæ," a nine volume work. Following her, in the twelfth century, was St. Hildegarde, a Benedictine abbess and a physician of the Rhineland, regarded by many as the best informed physician of her time. She suggested the circulation of the blood in the veins five centuries before Har-

vey demonstrated it. From her time on, several notable women practiced in Germany.

In France the situation was closely analogous to that in Germany, i. e., women physicians were rare or unknown till about the eleventh century. In the thirteenth century they could practice in certain localities, and succeeded to the point where it was the custom to have women physicians for women. However, by the sixteenth century, they had almost entirely disappeared from France. In England women physicians were practically unknown. England, France and Germany were quite backward, even concerning men physicians, as compared with Italy and the East, hence the fewer great names.

In America the first woman physician was Margaret Jones, in the Massachusetts Bay Colony, who was burned to death as a witch in the good old days of the Salem hysteria. But to Elizabeth Blackwell belongs the honor of winning the first doctor's degree in America, an honor she also duplicated in England. Her struggles will never be met with by other women, since several of our schools now admit women on precisely the same terms as men. While in school they undoubtedly add to the tone of the lecture room, they are good students, and they make good physicians and good research workers. Their success in life, so far as private practice is concerned, depends on three things: Their education, their personality, and their ability to overcome the fairly general prejudice of the public. In this country, at least, the amazing fact has been demonstrated that the greater the number of schools opened to them, the less the number of applicants. We do not presume to say that this is a characteristic of female psychology; we hazard the guess that men, under similar circumstances, would feel just the same way about it.

AMERICA'S FIRST DOCTRESS*

By VICTOR ROBINSON, New York, N. Y.

The newspapers put birth notices and obituaries on one page—but nature does the same. The storm uproots the oak, and it falls, but on the spot where the pride of the forest

*From the Medical Review of Reviews, August, 1916.

has perished, a blade of grass springs up to tell again the miracle of life. In the year that death reached Napoleon on the rock of St. Helena, and smote earth's mightiest giant, a baby girl was born to Mr. and Mrs. Blackwell at No. 1 Wilson street, Bristol, England. She was their third daughter, and they named her Elizabeth. She was a lively little thing, and before she outgrew her bib she dispatched, in partnership with her sisters, a request to papa for permission to play on the roof of the house. But father returned an ultimatum from which there was no appeal:

Annie, Bessie, and Polly,
Your request is mere folly,
The leads are too high
For those who can't fly.
If I let you go there,
I suppose your next prayer
Will be for a hop
To the chimney top!
So I charge you three misses,
Not to show your phizes
On parapet wall,
On chimney so tall,
But to keep to the earth,
The place of your birth.

The home of the Blackwells was encircled by brooks and violets and Sir Richard Vaughan's peacocks, and every day the young generation romped for hours along the elmy avenues of wooded Bristol. The children were not sent to school; private governesses and tutors instructed them, and it must have been a valuable education for these teachers to come into contact with such splendid, wholesome children. They were the heirs of comfort and culture, and only vaguely did the troubles of the outside world penetrate their enchanted demesne. In after years Elizabeth retained a dim recollection of having heard something of the Bristol riots, and of the incendiary fires which had been lit by men driven to desperation.

In 1832 the family prepared to move, and as Elizabeth was eleven, she was old enough to share in the excitement; the family was going to settle in America. The elder Blackwell preferred republican institutions, and intending to introduce the method of refining sugar by the vacuum pan process. When they left England, the cholera was sweeping across the country, and on the voyage several steerage passengers died from the disease, but the Blackwell family remained in good health, and the youngsters enjoyed the decks of the Cosmo as much as the fields of their native town.

They found New York also sick with the international malady—cholera is not a local affair. Manhattan Island looked as if it could be bought again for twenty-four dollars, but its value increased when Samuel Blackwell and his wife and descendants settled there. England has given to America no better gift than the Blackwells. From the first day they identified themselves with unpopular and righteous causes. It did not take them long to become ardent abolitionists; William Lloyd Garrison became a frequent guest, and on one occasion the Reverend Samuel H. Cox, who had incautiously asserted that the Lord Jesus belonged to a race with darker skins than ours, and was thus about to be lynched because he 'called Jesus Christ a nigger,' sought shelter and safety at their country home on Long Island.

When Elizabeth was seventeen, the family determined to go Westward. Mr. Blackwell believed that by cultivating beet-sugar in that section he would strike a blow at slave-grown cane-sugar. With their capacity for enjoyment, they were delighted with the rivers and mountains they crossed by canal and stage. Full of anticipation, they sailed down the forest-lined Ohio until they reached the flourishing town of Cincinnati, which has already been put on the medical map by such makers of American medicine as Daniel Drake, John D. Godman, Samuel David Gross, John Eberle, Reuben Dimond Mussey, Willard Parker and Marmaduke Burr Wright. But in those days Elizabeth Blackwell had no interest in medicine.

For a few months life was a song, but during the summer a bilious fever ended the career of the beloved father of the group. We may ask with the learned Robley Dunglison, 'What do you mean, sir, by biliousness?' and we may not know, but we know that Samuel Blackwell was dead. It was a staggering calamity, and aside from the sorrow which was like a thousand knife-thrusts in the heart, the once-happy family found themselves unprovided for in a strange land. Fate has no favorites—those upon whom she smiles today, she will smite tomorrow.

As soon as they were able, the three elder sisters established a boarding-school for young ladies, and the broken family circle kept together in Cincinnati until 1844, when Elizabeth was invited to take charge of a district school that was being organized in Henderson, Kentucky—where Robert Owen's scientific son, Dr. David Dale Owen, exhumed a practically complete megalonyx.

Like many girls, Elizabeth was an interesting letter-writer, and as this was her first separation from home, she wrote long descriptions of everything that happened in that muddy little Kentucky village. Her advent into Henderson

was like a fresh breeze blowing over a stagnant pool. The men were slow, the women hysterical, and everyone chewed tobacco and abused the negroes. But along the river bank was a beautiful spot known as Lover's Grove, where the sexes strolled and carved each other's initials on the 'unfortunate locust trees.' Elizabeth was often invited there, for the beaux admired her white teeth and other virtues. She accepted once or twice, but soon got dreadfully tired of such sentimentality, and while her swain was busily engaged in engraving an E on one side of the tree, she started off alone on what she called "a good brisk walk," and Lover's Grove knew her footsteps no more. At the end of the first term she resigned her position, for although her associates treated her with respect and kindness, nothing could induce her to remain in a community where human beings, on account of the color of their skin, were held in the house of bondage.

On her return to Cincinnati, a friend who suffered severely from a gynecological complaint, said to Elizabeth, "You are fond of study—why not study medicine? If I could have been treated by a lady doctor, my worst ordeals would have been spared me." Miss Blackwell flouted the idea as utterly preposterous. Her favorite studies were history, and—we regret to say—metaphysics. She informed her friend that she remembered when her teacher in physiology, in order to arouse the interest in his students in the wonderful structure of the eye, had exhibited a bullock's eye resting on its cushion of rather bloody fat—and she felt simply horrified. But that night, as she lay in bed, Elizabeth Blackwell seemed to hear the voice of suffering womanhood: "If I could have been treated by a woman physician, my worst trials would have been spared me."

As the idea gradually took shape it no longer seemed strange, and there was another circumstance which impelled her to seek the Hippocratic shrine; with charming naiveness she confesses that she was extremely susceptible to "the disturbing influence exercised by the other sex." She says that ever since she was seven she was perpetually falling in love, and one acute attack, instead of conferring immunity, was speedily followed by another. But the thought of marrying and leading the existence of a housewife, was repellent to her. Those were the times that stirred women's souls: Lucy Stone and Lucretia Mott and Belva Lockwood and Susan Anthony and Elizabeth Cady Stanton were striking the shackles from their sex and leading them into a new world—and the Blackwells marched in the vanguard. "I felt," wrote Elizabeth Blackwell during her next attack, "more determined than ever to become a physician, and thus place a strong barrier between me and all ordinary marriage. I must have

something to engross my thoughts, some object in life which will fill this volume and prevent this sad wearing away of the heart."

In 1845 she received an offer to teach music at the school and parsonage of the Reverend John Dickson, of Asheville, North Carolina. We can now go around the world in the time that it then took to travel from Cincinnati to Asheville; many rivers had to be forded, and three ranges of railwayless mountains to be crossed. But Elizabeth decided to go for two reasons: in the first place she needed the money, and secondly, the Reverend John Dickson had previously been a physician, and in her leisure hours she could study his medical books.

A portion of one of the long letters which she wrote from her new surroundings deserves to be quoted, as it exhibits her vivacity, gives us a description of her first medical case and proves how deeply interested was North Carolina in the welfare of its colored population:

Dear Mother—I received your welcome letter last night while engaged in your favorite Saturday evening's employment—singing hymns. A strange minister who was to preach next day had just arrived, and I, seated at the piano, surrounded by the girls, was supplying him with sacred entertainment when Howard Dickson laid your letter beside me. I smiled and gave an involuntary quaver in the "Come, Holy Spi—," which made the girls giggle; but seeing the four eyes of the two ministers bent astonishedly upon us, I pulled a long face, the girls straightened theirs, and we continued—"rit, Heavenly Dove."

I soon ran off with a candle and my letter and read with eagerness all the profane parts, and most of the religious, as it is a first letter. I am very glad that you derive so much peaceful satisfaction from Upham. I know it has as soothing influence, for whenever I had to go into your room of an afternoon I found you asleep on the bed with the book in your hand; but I find no lack of such books here—Jonathan Edwards on the Affections, which I have lately read, has the same peaceful tendency.

I have just performed my first professional cure, and am already dubbed Dr. Blackwell by the household. I mesmerised away a severe headache that afflicted Miss O'Heara, a kind-hearted, child-like, black-haired little old maid, the favorite of the family and especial pet of the children. She had just recovered from a very severe attack of illness, and great suffering in the mouth from calomel, which made her declare that no physician ought to receive his diploma till he has been salivated, that he may know the torture he is inflicting on his patients. I went into her room last night, and

found her suffering from an intense throbbing headache. I offered to relieve her, half doubting my own powers, never having attempted anything of the kind; but in a quarter or half an hour she was entirely relieved, and declared some good angel had sent me to her aid.

.... When I first came here I determined to teach all the slaves I could to read and write, and elevate them in every way in my power, as the only way I could reconcile it to my conscience to live amongst them; but to my consternation I found that the laws forbade it, and that Dr. Dickson was not willing to evade them. . . . I longed to jump up, and taking the chains from those injured, unmanned men, fasten them on their tyrants till they learned in dismal wretchedness the bitterness of that bondage they inflict on their brethren.

In 1846 the school at Asheville was disbanded, and Miss Blackwell journeyed across the Alleghanies to the rice-fields of South Carolina. At Charleston she was welcomed by Dr. Samuel Henry Dickson, who obtained for her a teacher's position in the fashionable boarding-school of Mrs. Du Pre. All her spare time was spent in pursuing the medical studies which Doctor Dickson directed. At that time he was one of Charleston's leading physicians, and had been the teacher of James Marion Sims, who thus describes him:

The Charleston Medical School was opened a very few days after my arrival. Dr. Samuel Henry Dickson was the Professor of Theory and Practice of Medicine. I well remember the introductory lecture; it was a brilliant effort, and I never heard such eloquence from a teacher's desk. He was a small man, very handsome, with a sweet, musical voice; a man of great literary acquirements, a fluent speaker, logical in his reasoning, convincing in his argument, and most captivating in his manner. But as a practical teacher I do not think that I ever learned much from him. The purity of his diction, and the eloquence of his discourse, and the beauty of his teaching captivated the ear, so that I was carried away entirely from the substance of what he attempted to instill into my mind.

Professor Dickson in later life was invited to become a member of the faculty of the Jefferson Medical College, of Philadelphia, and was thus included in that medical Baedeker, Samuel D. Gross' Autobiography. In those days, all medical roads led to Philadelphia, and here came Elizabeth Blackwell in the summer of 1847. There were four medical colleges in Philadelphia, and she determined to enter one of them. Philadelphia was full of famous professors; seven was considered the proper number for a faculty, and in the University of Pennsylvania were Nathaniel Chapman, Robert Hare, William Gibson, William E. Horner, Samuel

Jackson, George B. Wood and Hugh L. Hodge, while at the Jefferson Medical College the chairs were occupied by Robley Dunglison, Joseph Pancoast, Charles D. Meigs, Franklin Bache, Robert M. Huston, John K. Mitchell and Thomas D. Mutter.

She called upon the venerable Dr. Jackson, whose long, white hair was one of the landmarks of the city. When Miss Blackwell informed him that she wished to study medicine, he laughed and asked her why. Then she grew eloquent with reasons, and he became interested. He said he would do what he could for her, and asked her to come the following Monday for an answer. A Sabbath never seemed so long, but the next day, eager and hopeful, she presented herself at Jackson's office—and learned that the authorities were opposed to her entrance.

Dr. Horner advised her to try the Filbert street and Franklin schools. She applied, but was not accepted. Then a professor at the Jefferson Medical College informed her that it would be impossible to study in Philadelphia, but thought she might enter one of the New England schools. Dr. Pankhurst said he approved of her plan personally, but it was out of the question; however, if she would disguise herself as a man, he would permit her to attend the classes.

She interviewed Dr. Darrach, who could have given the Sphinx lessons in the delicate art of non-committalness. She spoke to him for a considerable time, and he set for several minutes without a reply.

"Can you give me any encouragement?" she asked at last.

"Madam," he said, "the subject is a novel one; I have nothing to say either for or against it; you have awakened trains of thought upon which my mind is taking action, but I cannot express my opinion to you either one way or another."

"Your opinion, I fear, is unfavorable."

"I did not say so. I beg you, madam, distinctly to understand that I express no opinion one way or another; the way in which my mind acts in this matter I do not feel at liberty to unfold."

"Shall I call on the other professors of your college?"

"I cannot take the responsibility of advising you to pursue such a course."

"Can you not grant me admittance to your lectures, as you do not feel unfavorable to my scheme?"

"I have said no such thing; whether favorable or unfavorable, I have not expressed any opinion, and I beg leave to state clearly that the operation of my mind in regard to this matter I do not feel at liberty to unfold."

By this time her Quaker friend, Dr. Warrington, was thoroughly discouraged. "Elizabeth," he said, "it is of no use trying. Thee cannot gain admission to these schools. Thee must go to Paris and don masculine attire to gain the necessary knowledge."

But Elizabeth Blackwell was waging a moral crusade; her task was to open the doors of the medical profession not for herself alone, but for her sex; disguises and evasions would not answer. She must fight the battle in the light of day.

She appealed to the schools of New York City, but like an unsuccessful manuscript, she was everywhere rejected with thanks. Blessed are the fanatics, for they never fail. She obtained a complete list of the smaller schools of the Northern States, and wrote to a dozen of these country colleges—among them being the Geneva Medical College.

"Geneva," said John Morley, "is no grain of sand; it is a grain of musk that perfumes all Europe." But Rousseau's biographer referred to Geneva in Switzerland, not to Geneva in New York State. For the American Geneva was a town of turbulence, ruled by a lawless crew, over one hundred strong. They answered the roll-call at the Geneva Medical College, but mischief was their desire and their delight. Rough and riotous daredevils, they interrupted every lecture with their noisy blustering—except when Doctor Webster, the merry professor of anatomy, was relating a story that was unfit for publication. These rowdy-dowdy students were a source of terror to Geneva's inhabitants, who threatened, on more than one occasion, to have the college indicted as a nuisance. But the faculty itself feared these young men—they were the sort who could demand their diplomas and other rights at the point of a horsewhip or a revolver. Yet there was good material among these boys, and some of the matriculants of the Geneva Medical College became eminent physicians—Moses Gunn, Corydon L. Ford and Stephen Smith.

On the twentieth of October, 1847, Charles A. Lee, the dean of the medical department, entered the lecture room, and begged the class for their attention; waving a letter, he explained that it contained the strangest request that ever was made to any faculty. The curiosity of the students was aroused, and they listened while Doctor Lee read an application to allow a woman to enter the college as a student. "Gentlemen," concluded Doctor Lee, "for this petition there is no precedent; never has a lady been admitted as a medical student; the decision of this matter rests with you." A mighty shout greeted this announcement, and as the professor escaped from the lusty lungs and the stamping feet,

he could not help thinking that any woman who was imprudent enough to venture into this trousered domain, would soon repent of her temerity.

That evening the class called a meeting to discuss the situation; a fellow named Stratton acted as chairman, and he certainly had to pound the gavel; speeches in the wildest hyperbole, entangled with laughter, cheers and applause, formed the program until it was decided to take a vote. "All those in favor of admitting the lady," said Stratton, "will signify by saying 'Yea.'" An ear-splitting "Yea!" shook the room. "Contrary, no," continued the chairman. For a moment all was still, then the silence was broken by a faint and single "No." Immediately the class laid violent hands on Geneva's solitary opponent of co-education, and he shouted a "Yea," which made the decision, like Washington's election, unanimous. The following resolutions were accordingly dispatched to the applicant:

Resolved, That one of the radical principles of a Republican Government is the universal education of both sexes; that to every branch of scientific education the door should be open equally to all; that the application of Elizabeth Blackwell to become a member of our class meets our entire approbation; and in extending our unanimous invitation we pledge ourselves that no conduct of ours shall cause her to regret her attendance at this institution.

More than two weeks passed, and as nothing further was heard from the applicant, the rumor spread that the whole thing was the hoax of a rival institution—which was easy to believe in the days when medical colleges sprang up in the night and disappeared as suddenly. But on the seventh of November the professor entered the lecture-room, followed by a young lady. She was pretty and small—and very serious. The students turned a surprised and curious eye upon her, and then hurriedly took their seats in silence. There was something about her that sobered that class into decency. Those students who had voted for her because they had visions of flirtations with a petticoat, now realized their mistake. They might admire her from afar, but knew they would be permitted no intimacy. The professor began his lecture, and there were no interruptions, because only Elizabeth Blackwell was listening to him. The others were glancing furtively at the new arrival, and wondering where she came from and who she was.

She was well received by the dean, Charles Alfred Lee. He was a peripatetic professor, teaching in various colleges throughout his career, and had the felicity to be quoted by Holmes in his immortal essay on the *Contagiousness of Puerperal Fever*. Dr. Lee edited, with extensive notes and edi-

tions, Guy's *Principles of Forensic Medicine*, and Copland's *Dictionary of Practical Medicine*, in three colossal volumes. He wrote *Physiology for the Use of Elementary Schools and a Manual of Geology*. He was one of the founders of the Buffalo Medical College, which has survived, and of the New York Medical College, which hasn't. He was one of the founders and editors of the New York Journal of Medicine. Gross, who met Lee for the first time in July, 1832, during the terrible visitation of Asiatic cholera in the city of New York, says he was a physician of not a little note in his day, and describes him as "a tall, handsome man, with a large head and a keen brown eye, a ready talker and writer." His name lives in Charles Alfred Lee Reed, a former president of the American Medical Association, who at present is attempting to gain immortality by proving that epilepsy is caused by a bacillus.

But the professor whom Miss Blackwell mentioned most frequently in her letters was James Webster, who edited the Medical Recorder until it was incorporated into the American Journal of the Medical Sciences. Dr. Webster was trained by the ill-fated but gifted John D. Godman, and was fresh from the directorship of the Philadelphia School of Anatomy which was an American edition of the Great Windmill street school that William Hunter established in London. The Philadelphia School of Anatomy had no charter and granted no degrees, but for half a century it gave this country her chief anatomists. The history of the Philadelphia School of Anatomy is practically the history of early anatomy in America—and W. W. Keen has written it.

Webster was a fat, fussy, cheerful and likeable little man; he grasped Miss Blackwell's hands so cordially and encouraged her to such an extent that in the diary it is written:

November 9—My first happy day; I feel really encouraged. The little fat Professor of Anatomy is a capital fellow; certainly I shall love fat men more than lean ones henceforth. He gave just the go-ahead directing impulse needful; he will afford me every advantage and says I shall graduate with eclat.

But then came trouble; Dr. Webster was reaching that branch of anatomy which he embellished with piquant remarks that were for men only. He accordingly requested Miss Blackwell to absent herself from these lectures, offering to go over the subject with her in private. This made her sad; she wrote him a note saying that she was there as a student with an earnest purpose, and as a student simply she should be regarded; she said that the study of anatomy was a most serious one, exciting profound reverence—and James Webster thought he was listening again to John D.

Godman. He was completely disarmed, and read her note to the class, while Elizabeth, who was waiting in the ante-room, listened with a full heart to the applause of the students. The professor opened the door for her, she entered amid an ovation, and throughout that term Webster lectured on anatomy without anecdotes.

Personality is a mysterious thing—and Elizabeth Blackwell had it. She tamed the Geneva Medical College. She has repeatedly testified that the behavior of the class during the two years that she was there was admirable. Her place in the various lecture-rooms was always kept for her, and during dissecting demonstrations, when the students crowded around, standing on stools and leaning against each other, they kept respectfully from her, and when they accidentally touched her head or shoulder, they drew back instantly.

The outsiders were not so easily won. A doctor's wife refused to speak to her; the women of the town gathered in groups when she passed—they decided she was either unbalanced or immoral. The children, who heard things, stared at her.

But Elizabeth Blackwell felt she was a marked person; through her the race would advance. Every act and word of hers must be beyond criticism. She hurried from her class to her room—every pioneer renounces the pleasures of the world. Late in the night, when all Geneva lay in its blanket, one light was still burning—Elizabeth Blackwell sat over her books; or a figure moved silently in the dissecting room; Elizabeth Blackwell still plied her scapel—so that thousands of women might hold it after her.

On the twenty-third of January, 1849, Miss Blackwell received what no woman had ever received before—a diploma which made her an M. D. One of her younger brothers was present at the graduating exercises, and wrote home a grandiloquent letter, which read in part as follows:

Beloved Relations—The important crisis is past, the great occasion over, the object of so much and so justifiable anticipation has been attained, and proud as I always feel of the Blackwells, my familism never seemed to me so reasonable and so perfectly a matter of course as it did this morning, when, having escorted E., into the crowded church and taken my seat beside her, we learned from the music that the graduating class, headed by the dean, trustees, faculty, tac., were marching in solemn conclave into the aisle.

On the morning of the Commencement little Dr. Webster was in his glory; he is a warm supporter of Elizabeth and likes a fuss, and nothing could exceed his delight when he found that the whole country round was sending in large

numbers of people, and that all the ladies of Geneva were turning out en masse to see a lady receive a medical diploma.

After a short address by Dr. Hale, the President, the diplomas were conferred—four being called at a time—and, ascending the steps to the platform, the president addressed them in a Latin formula, taking off his hat, but remaining seated, and so handed them their diplomas, which they received with a bow and retired. Elizabeth was left to the last and called up alone. The President taking off his hat, rose, and addressing her in the same formula, substituting *Domina* for *Domine*, presented her the diploma, whereupon our Sis, who had walked up and stood before him with much dignity, bowed and half turned to retire, but suddenly turning back replied: "Sir, I thank you; by the help of the Most High it shall be the effort of my life to shed honor upon your diploma;" whereupon she bowed and the President bowed, the audience gave manifestations of applause, little Dr. Webster rubbed his hands, the learned curators and faculty nodded grave approbation at each other upon the platform, and our Sis, descending the steps, took her seat with her fellow-physicians in front.

Now up walks into the pulpit Professor Lee, with a large manuscript and a solemn air, and commences his address to the graduates. It was on the whole good; he gave it pretty strong to Homeopathists, Hydropathists, Mesmerists, Thompsonians, etc., and gave the ladies of the audience quite a lecture for their encouragement and circulation of quack medicines, informing them that they had better study a little the principles of medicine before attempting to practice what they were so profoundly ignorant about.

At the close he alluded to the novel proceeding which they had taken, and the censure or imitation which it would necessarily create. He justified the proceeding, and passed a most gratifying and enthusiastic encomium on the result of the experiment in the case of Eliza. He pronounced her the leader of her class. . . . and by her ladylike and dignified deportment had proved that the strongest intellect and nerve and the most untiring perseverance were compatible with the softest attributes of feminine delicacy and grace.

The novel event attracted much attention and both the general and the medical press wrote columns about the fair M. D. Punch read about her in the Medical Times, and sent his compliments in these verses:

Not always is the warrior male,
Nor masculine the sailor;
We all know Zaragossa's tale,

We've all heard "Billy Taylor;"
But far a nobler heroine, she
Who won the palm of knowledge,
And took a Medical Degree,
By study at her college.

They talk about the gentler sex
Mankind in sickness tending,
And o'er the patient's couch their necks
Solicitously bending;
But what avails solicitude
In fever or in phthisic,
If lovely woman's not imbued
With one idea of physic?

Young ladies all, of every clime,
Especially of Britain,
Who wholly occupy your time
In novels or in knitting,
Whose highest skill is but to play,
Sing, dance, or French to clack well,
Reflect on the example, pray,
Of excellent Miss Blackwell!

Think, if you had a brother ill,
A husband, or a lover,
And could prescribe the draught or pill
Whereby he might recover;
How much more useful this would be,
Oh, sister, wife or daughter!
Than merely handing him beef-tea,
Gruel, or toast-and-water.

Ye bachelors about to wed
In youth's unthinking hey-day,
Who look upon a furnish'd head
As horrid for a lady,
Who'd call a female doctor "blue,"
You'd spare your sneers, I rather
Think, my young fellows, if you knew
What physic costs a father!

How much more blest were married life
To men of small condition,
If every one could have his wife
For family physician;
His nursery kept from ailments free,
By proper regulation,
And for advice his only fee
A thankful salutation.

For Doctrix Blackwell—that's the way
To dube in rightful gender—
In her profession, ever may
Prosperity attend her!
'Punch' a gold-headed parasol
Suggests for presentation
To one so well deserving all
Esteem and admiration.

In 1849 no American physician considered his education complete until he saw Louis—recall Osler's essay, the *Influence of Louis on Modern Medicine*, and the words of Oliver Wendell Holmes: "I doubt if I or my fellow-students did full justice either to Andral or to the famous physician of Hotel Dieu, Chomel. We had addicted ourselves almost too closely to another master, by whom we were ready to swear as against all teachers that ever were or ever would be. This object of our reverence, I might almost say idolatry, was Pierre Charles Alexander Louis."

So Dr. Blackwell journeyed to Paris and sent her card to the scientist who overthrew Broussaisism by figures and stopped blood-letting by statistics. The following day a tall, imposing-looking gentleman called upon her, and she saw the man who had helped to make several of her adopted countrymen illustrious in medical annals—Gerhard and Bowditch and the Jacksons and the Shattucks. She spoke to him of her desire for hospital and practical instruction, and Louis strongly advised her to enter La Maternite.

Thus began another chapter in Elizabeth Blackwell's life. Dr. Blackwell was permitted no privileges because of her medical degree; her status was that of the other pupils, who as a rule were ignorant girls from the provinces, studying to be midwives. But Miss Blackwell found these eleves charming and lovable—because she herself possessed these qualities. Her letters during this period are veritable essays in length and language and her mother must have felt blessed to have a daughter who was equally dutiful and gifted. Some of her pen-pictures are unforgettable. Here, for instance, is an exquisite cameo in words:

We have one eleve who goes by the name of "La Normande;" she is one of my pictures. A fresh, healthy complexion, browned by the sun and the sea air of her beautiful home, regular features, a stout, vigorous frame that has never known a touch of sickness, she walks about with a step that feels the ground; in her white quilled cap, and handkerchief pinned over her bosom, she looks with her clear blue eyes right into your face, and has a frank, loyal manner that marks her honest, independent nature. On Sun-

day she dresses in the short full petticoat, the silk-laced jacket, and the lace-cap, with its towering pyramidal crown and circular ray-like border, that I think I have already described to you. She sometimes visits our dortoir and forms the centre of a group, whom she entertains with her constantly overflowing life, sometimes singing, in a deep contralto voice, her peasant hymns to the Virgin—simple, pathetic melodies chanted under the lindens when the day's labors are finished—or dancing vigorously the figures, more gay than graceful, of her country, while she sings some lively air. I admire her vigorous life, I like to see her in the infirmary; she tends the sick with such an honest awkwardness, such a kind heart, and lifts them like babies in her strong arms, that I see the green fields and smell the sweet country air as I watch her.

Elizabeth wrote also to her mother about a handsome interne, M. Blot, who blushed, or looked intently at one of the babies, or passed his fingers through his hair, whenever she asked him a question, so she determined not to disturb his young life in that way. But gradually they grew more sociable and discussed various matters, and on one occasion he told her he had a young friend, named Claude Bernard, who was on the eve of a great discovery.

Dr. Blackwell's Parisian sojourn was gladdened by a letter from Professor Webster and a visit from Professor Lee but she carried away from La Maternite a sad memento:

On the fourth of November, 1849, she served in the infirmary as usual; she felt something was wrong with her eye, but the thought of what it might be was too awful to contemplate. This was before Crede had made himself a benefactor of mankind by putting a drop of silver nitrate in the eyes of infancy, and there was much gonorrheal ophthalmia in the world. She remembered that while syringing one of the tiny patients afflicted with purulent conjunctivitis, a spray of pus spurted into her own eye. At night it was much swollen, and the next morning the lids were adherent from suppuration. The girls wept and assured her she would soon be well and ran for Doctor Blot. The handsome young man examined the eye carefully, and in his looks she read the diagnosis. She was sent to bed, and every two hours, day and night, he attended to her—but the weapons of ignorance cannot conquer a dreaded disease, and of no avail were the leeches to the temple, the ointments of bella donna, and the diet of broth.

Weeks passed and she lay in bed with both eyes closed, and Doctor Blot admired her braid of long hair, wondering how fingers without eyes could arrange anything so beautifully regular. With two frank eyes looking the world brave-

ly in the face she had entered La Maternite, but she left it bandaged and veiled.

As her health was at low ebb, she journeyed to Freiwaldau, in the hope that the hydrotherapeutic procedures of Priessnitz would restore her. Vincenz Priessnitz she describes as "a middle-sized, elderly man, with sunburnt face marked with the smallpox, with grey hair, light-blue eyes, a pleasant expression of face and dressed in country-best style. I liked his appearance; 'twas honest and good. He examined me very closely with his little blue eyes all the time I was explaining my wishes. Then, in his abrupt manner, he told me he could make me quite strong in about six weeks, and the cure would do no harm to my eye."

At the time of her visit, Preissnitz had 500 patients under his care. He was born an Austrian serf, but by his use of water and sunshine he became a millionaire, and his daughter married a baron.

An inflammation of the eye drove her from the Bohemian mountain-side to Paris, where she consulted Desmarres—who taught Albrecht von Graefe, who taught us all. Dr. Blackwell has testified to the skill of Desmarres; the sight of one eye was permanently gone, but within a few weeks he restored his patient to activity. Six months of her life had been lost, and she was forced to abandon her dream of becoming the first of female surgeons.

With the same battling spirit as of old she arrived in England, and in order to prove that she was no slouch, she fought for admittance to the historic Saint Bartholomew's Hospital—what would Harvey or Percival Pott or Abernethy have said? She achieved her aim, and was cordially welcomed by James Paget himself, now famous for his original description of malignant eczema of the nipple, and of osteitis deformans. Here she enjoyed Paget's lectures on surgical pathology, and the physiological lectures of Sennott Kirkes, whose treatise on physicians was published in 1848 but is still being edited.

During the summer of 1851, Elizabeth Blackwell returned to America, and after settling in New York, she requested an appointment as one of the physicians to the women's department of a large dispensary. As her application was refused, she decided to form a dispensary of her own, for which purpose she rented a room near Tompkins Square. From this humble beginning arose the New York Infirmary and College—of women, for women, by women.

In 1856 Elizabeth Blackwell received an ally who was cast in the same heroic mould as herself—Emily Blackwell. Emily was five years younger than Elizabeth, and when her time came to study medicine, she naturally turned to her sis-

ter's alma mater. The Geneva Medical College had put its hand to the plow of progress, but on seeing the impenetrable jungles of prejudice, it left its work unfinished. The Geneva Medical College replied to Emily that they "were not prepared to consider the case of Elizabeth as precedent," so there began again a weary hunt for a college. Finally good news came; Chicago's oldest school, the Rush Medical College, accepted her. She spent her first year term, but on returning for the second term, found herself debarred. For the State Medical Society had berated the Rush Medical Society for admitting a woman, and the gallant gentlemen promised to do penance by casting out Miss Emily Blackwell.

Medical societies have too frequently been boulders in the medical path: we have advanced by stumbling over them or by avoiding them. The Philadelphia County Medical Society, meeting in the city where the Declaration of Independence had been signed, inserted in its constitution the resolution that any member who consulted with a woman physician would be expelled. But darkness was all around. Long afterwards, when the Massachusetts Medical Society, as the result of years of argumentation, admitted women as members, this announcement appeared in that antiquated periodical, the Boston Medical and Surgical Journal: "We regret to be obliged to announce that at a meeting of the councillors held October 15, 1879, it was voted to admit women to the Massachusetts Medical Society." Yet in recent issues of the above-mentioned journal, we have read articles by medical women, and in its advertising pages there are requests for female physicians. Tuberculosis is not the most prevalent disease—it is not so widespread as misoneism.

Emily Blackwell was now compelled to search for an institution which would graduate her, and this she found in the Cleveland Medical College of the Western Reserve University. She supplemented her studies by taking courses under James Rushmore Wood, one of the founders of the Bellevue Medical College of New York, who was more noted as a surgeon than a Latinist, for while he gained Langenbeck's admiration by removing a lower jaw so skillfully that the remaining periosteum formed another jaw, he once admonished his class, "Gentlemen, as you go out into the world remember the eyes of the vox populi are upon you." Emily's postgraduate work was done at Edinburgh, where she was the pupil and assistant of James Young Simpson, who introduced chloroform into obstetrics on the very day and year that her sister left Philadelphia to enter the Geneva Medical College—which we mention for the sake of those who are fond of coincidences. In 1856 Dr. Emily Blackwell re-

turned from her European studies and associated herself with the New York Infirmary for Women, and for years was dean of its Medical College.

In 1859 Elizabeth was again in England, and it was during this visit that the Medical Council, under the presidency of the famous Benjamin Brodie, no longer able to overlook her various credentials, entered her name in the Medical Register; so ten years after becoming the first woman physician in America she became the first woman physician in England. At this time she lectured on a proposed hospital for the treatment of the diseases of women, and her auditors were much moved. "I well remember," said Dr. Blackwell, "the tears rolling down the benevolent face of Miss Anna Goldsmid, who sat immediately in front of me. But the most important listener was the bright, intelligent young lady whose interest in the study of medicine was then aroused—Miss Elizabeth Garrett—who became the pioneer of the medical movement in England."

But when Elizabeth Garrett was halfway through her studies she discovered that no degree would be granted to her in England; consequently she left her country, and in 1870 was the first woman to receive a diploma from l'Ecole de Medecine of Paris. The following year this school conferred the degree upon an American girl, Mary Putnam, who was the first woman to take the entire course there. Upon returning to New York, Dr. Putnam became professor of therapeutics and materia medica in the Woman's Medical College that the Blackwells had founded, and when the New York Post-Graduate School was established, Mary Putnam's reputation was so high that she was appointed professor of pediatrics—in a man's school. At the suggestion of the president of the Medical Society of New York County, she was made a member of the society, and a few months later she married the president, Abraham Jacobi. Mary Putnam was probably the ablest of the American women who have studied medicine; her technical knowledge of the science was more extensive than that possessed by the Blackwells, she was the recipient of various professional honors, such as being appointed visiting physician to St. Mark's Hospital, dispensary physician to Mt. Sinai Hospital, delegate to the State Medical Society, chairman of the section on neurology of the New York Academy of Medicine, and contributed not only to the current medical press, but to such solid works as Pepper's System of Medicine, Keating's Cyclopedic of Diseases of Children, and Wood's Reference Handbook of the Medical Sciences. In Woman's Work in America, Mary Putnam Jacobi has told the story of the Blackwells.

In August 1859, Elizabeth Blackwell returned to America, and worked here another decade.

Some foreigners become Americans as soon as the steamer docks at Ellis Island, but others remain strangers though they live here for a generation—it is a matter of temperament. Elizabeth Blackwell was brought to this country in 1832, and as she was not yet acclimatized by 1869, she thought it was time to return to her native land.

So she kissed her Americanized sister good-by, and departed for her mother country. She revisited Bristol and passed No. 1 Wilson street. A desire seized her to enter the home where she was born, and its present occupants welcomed her in. As she stood in the hall looking up the stairs, she herself seemed to disappear, and suddenly she saw a childish face peeping wistfully over the railing, and in that moment she remembered what she had forgotten for forty years—she had been sent away from the supper table for a breach of etiquette, but a jolly minister who was present that evening kept the table in a roar, and the banished and supperless Bessie, with her name in the Black Book, had leaned over the banister to catch some of the laughter.

Dr. Blackwell settled in London as a physician, and within her social circle were included some of the most noteworthy personalities of the time. Florence Nightingale and Lady Byron were among her dearest friends, she knew Herbert Spencer and George Eliot and Dante Gabriel Rossetti, and when Charles Kingsley first met her, he greeted her with the exclamation, "You are one of my heroes."

Most people grow old, but Elizabeth Blackwell grew venerable. In 1895 she published her autobiography under the title, *Pioneer Work in Opening the Medical Profession to Women*. It is a delightful book—due chiefly to her letters; if any more of her correspondence is extant, it should be published.

Throughout her career Elizabeth Blackwell delivered various lectures and wrote some essays which in 1902 were collected and published under the title, *Essays in Medical Sociology*. Every author has written at least one book which should be suppressed, and this is the Blackwellian product which ought to be consigned to oblivion.

The trouble with Elizabeth Blackwell is that she was a Swedenborgian-theosophical-teleological-Christian metaphysician, instead of just an unadulterated scientist. On account of her fallacious belief in the beneficence of nature, she rejected immunology. It is true she had a personal grievance here, for one of the first children she vaccinated, died from the operation, and doctors hate to lose their first patients; Marion Sims lost his first two babies and become so

disgusted with himself that he tore his tin sign from his house, cast it in an abandoned well, and left town. Elizabeth Blackwell did not do anything so dramatic, but she philosophised; she wrote that she was strongly opposed to every form of inoculation of attenuated virus, and that she considered it wrong to introduce any degree of morbid matter into the blood of the human system.

She repeatedly refers to herself as a "Christian physiologist," but we must point out that to be a "Christian physiologist," is almost as absurd as being a "Christian scientist." As a matter of fact, Dr. Blackwell was not any sort of a physiologist. But considering herself a Christian physiologist, she finds it necessary to become highly indignant that any one should attempt, in a Christian nation, to introduce circumcision, which she defines as a heathenish and unnatural practice which originated among licentious nations. "Circumcision," she writes "is based upon the erroneous principle that boys—half the human race—are so badly fashioned by the Creative Power that they must be reformed by the surgeon; consequently, that every male child must be mutilated by removing the natural covering with which Nature has protected one of the most sensitive portions of the human body Bad habits in boys and girls cannot be prevented by surgical operations Parents therefore should be warned that this ugly mutilation of their children involves serious danger, both to their physical and moral health."

Not often do so few words carry so many mis-statements, and the last sentence at least, must be characterized by a harsher epithet. Her views on impotence, continence, masturbation, venereal prophylaxis and illicit intercourse, are on the Reverend Sylvanus Stallian style, but have no place in modern sexology.

To Dr. Blackwell's dismay she discovered that London's climate gave her biliary colic, and as a result she established her residence at Hastings. At the mention of that name, many of us hear the clash of contending armies and see the vanquished Harold and William the Conqueror—but some of us think of Elizabeth Blackwell. She too was a warrior. In her girlhood she unsheathed the sword of justice against entrenched prejudice. The battles that she fought were not easy of victory; to overcome the stupidity of ages requires faith, courage, persistence and foresight. Yet she never retired until her cause had triumphed. No medical college in the city of New York would admit women, so she founded one which was continued until Cornell University opened its medical door to her sex. There was no infirmary where

women could obtain clinical instruction, so she established a hospital which today is flourishing.

School after school has become co-educational. No longer must the woman knock upon gates bolted with bias. The leading institutions now accept her. She is at Johns Hopkins, not only among the students, but on the faculty. She is welcome at the University of Michigan, and at Tulane. She may enter Leland Stanford, and she is invited to Cornell. The Rush Medical College, no longer in fear of the State Medical Society, bids her come. Even the University of Pennsylvania now admits her, but as Miss Sara Frazer Hillman rather tartly says, "As this Medical School was founded in 1765, it has taken Philadelphia over one hundred and fifty years to make up its mind to this rash step." Only the other day, Columbia announced that hereafter women will be admitted to the College of Physicians and Surgeons; and as we write, the news comes that the girls may go to Yale.

In 1910, Elizabeth was eighty-nine years of age, and Emily was eighty-four; in that year, both of the sisters passed away—one in Hastings, England, and the other in Montclair, New Jersey. Hand in hand they had fought the good fight, and though the ocean stretched between, together they went down into the peaceful valley of death.

In these pages we have told the story of one of the pioneers, but it would be a pleasant task to tell of the others; of Sarah Adamson Dolley, the second woman in America to receive a medical diploma, after which she organized the Blackwell Medical Society of Rochester, which still exists; of Marie Zakzewska, the protege of Elizabeth Blackwell, who founded the New England Hospital for Women and Children, where Susan Dimock, a graduate of the University of Zurich, began her brilliant and brief career; of Ann Preston, who wrote the ever-memorable reply to the reactionary Philadelphia County Medical Society; of Rachel Bodley, the dean and professor of chemistry at the Woman's Medical College of Pennsylvania; of Mary Thompson, whose hospital is still a factor in the medical life of Chicago; of Sarah Hackett Stevenson, the first woman to be appointed to the staff of the Cook County Hospital, of Chicago, who was sent in the centennial year as a delegate from the Illinois State Medical Society to the American Medical Association; of Rebecca Cole, the colored physician, to whose virtues and abilities Elizabeth Blackwell has testified in her Autobiography; of Elizabeth H. Bates, who established the Bates Professorship of Diseases of Women and Children at the University of Michigan; of Mary Putnam Jacobi, who said, "Notwithstanding the orthodoxy of the tradition that represents the

first woman as risking even Paradise in the pursuit after knowledge, the world continues to preserve a respectful prejudice, to the effect that the less women have to do with knowledge the better." These pioneers are gone, but the women physicians who live and work today, have justified the vision of Elizabeth and Emily Blackwell.

A few months ago, at the New York Infirmary for Women, a tablet by the talented Victor David Brenner was unveiled to Emily, whose connection with the Infirmary was of longer duration than that of the English-loving Elizabeth. Interesting individuals spoke at the exercises, and one of them was over ninety years of age; his name is Stephen Smith, and he was one of the boys of the Geneva Medical College when Elizabeth Blackwell came there as a student. This man has seen history—he has seen ten thousand women follow in the footsteps of America's first doctress.

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It is expressly stipulated that the competitor who receives the prize, shall publish his essay in book form, and that he shall deposit one copy of the work in the Samuel D. Gross Library of the Philadelphia Academy of Surgery, and that on the title page, it shall be stated that to the essay was awarded the Samuel D. Gross Prize of the Philadelphia Academy of Surgery.

The essays, which must be written by a single author in the English language, should be sent to the "Trustees of the Samuel D. Gross Prize of the Philadelphia Academy of Surgery, care of the College of Physicians, No. 19 South Twenty-second street, Philadelphia," on or before January 1, 1920.

Each essay must be typewritten, distinguished by a motto, and accompanied by a sealed envelope bearing the same motto, containing the name and address of the writer. No envelope will be opened except that which accompanies the successful essay.

The committee will return the unsuccessful essays if reclaimed by their respective writers, or their agents, within one year.

The committee reserves the right to make no award if the essays submitted are not considered worthy of the prize.

WILLIAM J. TAYLOR, M. D.,

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Trustees.

A NEW SONG FOR MEDICAL OCCASIONS.

In its issue for June, 1916, Dr. J. B. Carrell, editor of the Bucks County Medical Monthly, says: At our splendid Bristol meeting, May 10, 1916, Professor LaPlace in an after-dinner speech, among other things for the benefit of the profession, suggested that a member of our Society compose and originate a rallying song which could be sung at medical meetings; for song draws hearts together as no other influence can. It cheers in distress; it lightens heavy loads; it cements friendship and makes us happier and better. Our fellow member, R. H. G. Osborne, M. D., who has so often given freely in poem his beautiful thoughts, has complied with Professor LaPlace's suggestion, and his "Cantus Medicorum" is offered to the profession, set to that grand old Scotch air, "Auld Lang Syne." Let it be sung wherever medical men meet together, that they may more fully appreciate the grandeur and the nobleness of our almost sacred profession. This song is most respectfully, and with appreciation, dedicated to Professor Ernest LaPlace, the man who inspired the thought in our esteemed Dr. Osborne.

CANTUS MEDICORUM.

Some seek for power, and some for wealth,
And the many for what they can,
But the thing we seek is the Reign of Health
Thro' the wide, wide world of man.
We are proud to serve, and we toil unawed
By the glitter of rank or place,
For we see the mark of the hand of God
In the lowliest human face.

Chorus:

Our Charter stands with its page unrolled,
And its unrepealed decrees;

And, as loyal sons, to the pledge we hold
Of the great Hippocrates!

We make no boast: we are men of deeds,
And the deeds are not done for gold;
Our loftiest aim is for human needs,
And we win for mankind to hold.
With problems grand we are set to deal;
Then, let our hearts be strong,
For the humblest soul in the ranks may feel
He is helping the world along.

We may love the scent of the lily and rose,
And the garden sweet with flowers,
But Death may turn on his fearless foes,
And the martyr's fate be ours.
There is much, indeed, in life's little span,
To quicken, enchant, enthrall,
Yet the doctor's fight with the ills of man
Is the noblest life of all.

We look for much in the years unborn,
But the present absorbs us, too,
With the doctor's duty to guide and warn,
And the wrong, if he can, undo.
O Brothers! ours is stainless wealth,
The wealth that no greed can bind;
Our riches lie in the Reign of Health,
And the welfare of mankind.

DIAGNOSIS OF FEMALE DISORDERS.

Manufacturers of "Uterine wafers," etc., often advise the use of their preparations without physical examination of the patient when patients are disinclined to submit to such physical examination on the chance that one of the asserted constituents of the proprietary may hit the cause of the trouble. In this connection the testimony of J. Clarence Webster, professor of Obstetrics and Diseases of Women in Rush Medical College, Chicago in the "Wine of Cardui" case is of interest. He was asked: "Is it necessary to make an examination of the female pelvis in order to determine the condition, the underlying cause of the condition and the treatment which is necessary?" He replied: "It is necessary. Because from symptoms one can rarely have any accurate idea of the pathological conditions in the body, in this part of the body. There are many symptoms which are common to different conditions and consequently it is necessary in analyzing a case to make a careful physical examination." Again, when asked, "Can you determine, or can the conditions of the uterus, or pelvic organs be determined merely by attention to description of symptoms which a patient gives?" he replied "I cannot."

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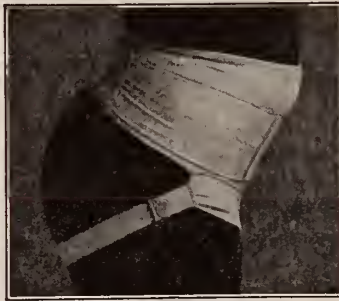
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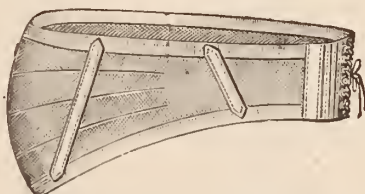
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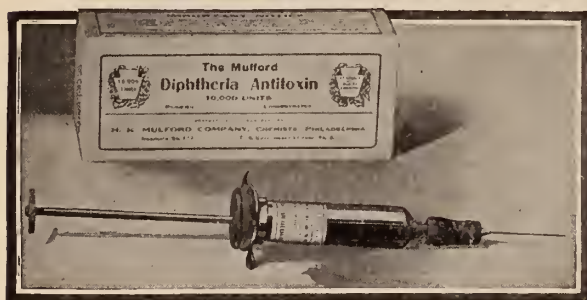
By intravenous injections in severe or late-treated cases.

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*Osler states: In 183,526 cases of diphtheria treated in 150 cities previous to the use of antitoxin, the mortality was 38.4. Since the introduction of the antitoxin treatment, records of 132,548 cases show a mortality of 14.6; and leaving out those cases which did not receive serum injection, the mortality is reduced to 9.8. It is estimated that without antitoxin there would be, in the United States, over 64,000 deaths yearly from diphtheria, while the mortality has been reduced by the use of antitoxin to less than 15,000 in the United States alone. This means a saving of over 49,000 lives a year.

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915 Washington Street

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Vol. VII

OCTOBER, 1916

No. 11.

A NEW LEASE ON LIFE.—We are happy to state that at the recent meeting at Milford of the Delaware State Medical Society it was decided to continue the publication of this Journal for another year. In the past five years the question of "to be or not to be" has stared us in the face annually, but on each such occasion it has turned out that it is "to be." To publish a medical periodical worth its salt is not an easy task even in States where there a great number of physicians, large hospitals conducting researches, and teaching institutions. All these make "copy." Here in a small state like Delaware we lack all three of the above requisites, with the result that publishing our little Journal is not made the easier thereby. We are therefore forced to rely on our exchanges to an extent that is distinctly embarrassing; with us medical news, hospital news, local personals, and above all, papers concerning researches and case reports, seem remarkable chiefly for their paucity. This part of it we can remedy somewhat if we will; it simply requires paper and ink and a little time on the part of each member of the profession. Very soon the Journal will have caught up to date, and will thereafter appear monthly on

time, which circumstance, will, we hope, stimulate us to support it better. Its future is necessarily limited, but that is all the more reason why each one should do his share. The editor cannot essay the task successfully unless somebody else does some writing too.

TUBERCULOSIS COMMISSION REPORT.—The seventh annual report of the Delaware State Tuberculosis Commission for the year 1915 has just been published, and indicates a year of increased activity. The number of new cases treated at the nine dispensaries is gratifying, being almost equal to the number of old cases treated, some of which latter have been under observation for as long as five years. A tabulation of these old and new cases, and the cost per case, not given in the report, together with the report's statement of total costs is as follows:

	Old Cases	New Cases	Total Cases	Total Ex- penditure	Cost per Case
Wilmington	292	201	493	\$2,319.74	\$ 4.70
Milford	37	74	111	926.65	8.35
Dover	5	11	16	391.30	24.45
Smyrna	25	33	58	509.06	8.76
Harrington	5	11	16	355.60	22.22
Lewes	9	15	24	480.34	20.01
Georgetown	8	14	22	406.04	18.46
Seaford	7	17	24	412.38	17.18
Middletown	38	34	72	668.96	9.29
Totals	426	410	836	\$6,470.07	\$ 7.74

These figures show eloquently how economically the money was spent—less than \$8.00 per case—especially since the work was scattered over nine dispensaries, each buying supplies separately. They also show one other thing; the amounts available should be vastly increased. We cannot afford to be niggardly towards such important work as this tuberculosis work is. The table shows better than words the great economies possible in buying for and treating large numbers: compare the figures for Wilmington with those for Dover. The number of persons needing dispensary treatment for tuberculosis in the state is several times the 800 treated, hence, let us see to it that the necessary funds are forthcoming, and that the valuable suggestion of the Secretary of the Commission, Dr. Harold L. Springer, that supplies be purchased for the State as a whole, be followed. The saving at first may not be so large, but every little bit helps.

Women and Tobacco*

By CHARLES B. TOWNS, New York, N. Y.

Civilized man has been smoking since the days of King James, but it is only recently that its use among the respectable women of this country has been noticeable. As late as five years ago, when I wrote an article on the "Injury of Tobacco," for the Century Magazine, I did not feel that at that time its influence among women of this country was sufficient for me to even mention them in connection with its use. It is only a short time ago since an ordinance was passed, by the Aldermen of New York, through the influence of the late Timothy Sullivan, who was at that time President of that Board, to prohibit women from smoking in public places, but in the brief period that has elapsed, the ordinance has already joined antiquated blue laws, and women are smoking at will in the principal hostelryes of this and other States throughout our country.

Only a few days ago an article appeared in one of the daily papers which stated that some of the members of the Colony Club (which, we might say, is exclusively a woman's club) had petitioned the officers of that club to set aside some place where smoking would not be permitted. In many of the best known female seminaries young women in their teens are permitted to smoke with their parents' consent.

The saddest thing about the use of tobacco by women is that the upper classes of society have placed their unqualified approval on the use of tobacco by women, and until this sanction is withdrawn by this same body of women, there will not only be no progress made towards the lessening of this vice among that class, but there will be a constant army of recruits added to the poison squad of tobacco users.

The woman who permits herself to drift into habits of this kind soon loses all self-control and goes the limit, and it is only a matter of time, which depends entirely upon her physical constitution, on how long she will last. There is nothing on earth she can do that will so surely bring about her mental and moral ruin as the use of tobacco. It changes her entire mental attitude towards life and she lets down the

*From the Med. Rev. of Rev., Aug. 1916.

last bar of reason and seeks and courts congenial companionship among other unfortunates of her class and in the end it degrades everything in woman that is worth while, and in a short time the lovely, devoted, clean wife and mother becomes negligent of all her womanly duties and responsibilities, and if an alcoholic history has not previously existed it is only a matter of time when she will also acquire that vice. Can you picture a more disgusting human being than an alcoholic and nicotine-poisoned woman?

The influence and environment of the home is measured by the mother, not by the father, with few exceptions. We men must all concede that women are very much stronger characters than we are. There are very few successful men but owe their success to their wives. Any man left to himself by women amounts to little. No woman puts herself on a par with a man when she indulges with him in life's vices, she always puts herself beneath him. There is some hope of saving a man who may drift into the taking of drugs and drink but when a woman takes up drugs and drink for the sake of dissipation the moral hazard is far greater than among men, and there are very few of them in the end who are ever restored to normality. When they begin to dissipate they travel faster and further than men do.

When a woman with a cigarette history is brought to me for help I invariably throw up both hands and am frank to say that we can hold out little or no hope for her regeneration.

There is no real man who, even though he uses tobacco himself, looks with favor upon a woman using it, and I have never seen a real man indulging in the use of tobacco with woman—it has always been a thing in trousers. If the young women who use tobacco knew the mental estimate in which men hold them, there would be few tobacco users among them. They are immediately associated with the morally low, it makes no difference what their breeding or social standing may be. They are looked upon with suspicion, and time and place and circumstances permitting, they sooner or later have to defend their virtue or lose it.

Nature indeed has been most wise in so many ways, and she certainly has been most considerate in discouraging both mentally and physically the desire and anticipation of motherhood among women who take up the use of tobacco. No more pitiful sight on earth could possibly be imagined than the spectacle of some mother who is a cigarette smoker in bringing into the world a poor, pitiful physical and mentally defective child, and besides not wanting to assume any of the responsibilities of motherhood in rearing it.

So this type of woman will not contribute, fortunately, to the increase of our population.

There is no worse case of drug habit that has ever come under my observation than that of the confirmed female tobacco user. There is nothing that she can possibly do that is going to so surely rob her of her good looks, of everything in her life and make up that is pleasing and fascinating to men—and the men who tolerate their smoking are the first to kick them aside for those who are younger and prettier, when the tobacco has worked its irreparable havoc.

PSORARSIS*

By GEORGE C. MCELFRATRICK, M. D., Wilmington.

Psoriasis is a chronic inflammatory disease of the skin, with more or less thickened and elevated, dry, inflammatory and somewhat wrinkled patches, variable in size, shape, and number, and covered with abundant whitish and grayish colored imbricated scales, constituting from three to four per cent. of the cases observed in dermatologic practice.

The cause is not known. The source of the affection is probably limited to the skin itself. Gout, rheumatism, heredity and parasitic infection are believed to be causal factors.

Psoriasis may begin at any age, but usually manifests itself first in youth and early adult life.

Symptoms—It invariably appears first as small reddish pin-point to pin-head sized flat or acuminate papules. These constitute the sole primary lesions of psoriasis. The papules are early seen to be surmounted by small scales, and when these are not apparent they may be made visible by slightly scratching the lesions. The papules increase in size gradually or rapidly by peripheral extension forming patches or plaques of varying dimensions. The small patches are usually round or oval when increase in size occurs, through coalescence of neighboring patches all sorts of forms and configurations may be produced.

The patches of psoriasis are sharply defined, of a dull reddish hue and slightly elevated above the level of the surrounding integument. A moderate degree of infiltration is

*Read before the New Castle County Medical Society, May 16, 1916.

present. One of the striking features of the disease is the characteristic scaling. The papules and the shining, whitish, grayish, or mother of pearls, are superimposed upon another in a manner somewhat like the shingles of a roof or in other cases like layers of isinglass. When the scales are removed, a reddish base is exposed, which exhibits upon scratching with the finger nail punctate hemorrhages, which issue from the apices of the abraded capillary loops of the papillae.

Serious oozing is never present under ordinary circumstances, the lesions are always dry and scaly and unaccompanied by vesiculation of super-exudation.

The eruption attacks with predilection the scalp, and the exterior surfaces of the extremities, particularly the elbows and knees. The face is usually entirely free but in other cases exhibits reddish scaly patches along the border of the hair, in the eyebrows and even occasionally upon the cheeks. The palms and soles are rarely ever affected.

The nails are occasionally involved as a result of which they become discolored, thickened, transversally grooved or pitted.

The only discomfort the patient suffers is from the itching which at times is very severe and distressing. The disease is essentially chronic. Few cases become permanently cured, but the affection shows spontaneous improvement in the summer in many cases.

Diagnosis—A typical attack of psoriasis presents no difficulty in diagnosis. There are a few affections, however, which may be confounded in irregular cases. Squamous eczema occurring in patches may be confused with psoriasis. In eczema the tendency is to involve flexor surfaces, itching is severe, the patches are irregular and do not clear in the center, there is usually a history of moisture and there are no silvery imbricated scales, and there is decided infiltration and thickening.

Papulosquamous syphilis may be distinguished from psoriasis by its history, concomitant signs, distribution, and absence of itching, multiformity of the lesions, scanty scaling and deep seated infiltration. The Wassermann test will clear diagnosis.

Seborrhea of the scalp and psoriasis of the same region are frequently confounded. In seborrhea the scalp is paler, the scales are finer, smaller, more generally diffused, of a grayish or yellowish color and greasy sebaceous character. Psoriasis of the scalp occurs in patches, which are reddish, and infiltrated and there are almost always patches of the disease on other parts of the body.

Treatment—At the outset it may be said that there is

no specific remedy for psoriasis, no set formula which will do well in all cases, but these will be found to be useful in the patients, and not in others. Moreover, a remedy may be efficacious at one time and fail in another attack in the same individual. When a treatment is once instituted it should be given an adequate trial, unless it is found to be doing harm.

If the patient is found to be suffering from any systemic disturbances, it is obviously important to correct such deviations from health. Gout, rheumatism, neurasthenia, anemia, digestive troubles require treatment deviated toward these special conditions.

As regards diet, no dogmatic rule can be established. A frail and anemic girl will obviously require a different diet from a robust, full-blooded man.

In general the dietary should be simple, with limitation of nitrogenous articles, more particularly red meats. Buckley advises a vegetarian diet for psoriatic patients.

The most valuable remedy is arsenic. Arsenic is used chiefly in the form of Fowler's solution and arsenic trioxid. Fowler's solution one to three minims three times a day may be increased to ten drops three times a day in adults.

Potassium iodine in large doses has been found useful in this disease. It is like arsenic, inconstant in its effects and will frequently fail.

The salicylates and particularly salicin are warmly recommended by Crocker, especially in the early stages of psoriasis. When arsenic is contraindicated Crocker usually commences with 15 grain doses three times a day and increases to 20 grains.

Mercury by mouth or hypodermic injection has been used in psoriasis with satisfactory results in some cases. About 1-5 grain of the iodide mercury three times a day is advised. Brommell uses typhoid extract.

Local Treatment—This consists in the removal of the scales, which must be removed so that the medicaments may be applied directly to the skin surface. Scales may be removed by ordinary soap and water, or by friction with soft soap. The local remedies that enjoy the greatest reputation in psoriasis are chrysorobin, pyrogallis acid, ammoniated mercury, salicylic acid.

Tar is a valuable application and is usually well borne. Its odor and color are its chief disadvantages. It may be used in ointment, paint or bath. Preparations usually employed are oil of cade or oil of birch, in strength of one to four drams to the ounce.

Chrysorobin, a yellowish powder derived from the Goa powder of the East Indies is the most rapidly efficient

remedy at our disposal. It stains the skin temporarily and the underclothing permanently, which is the disadvantage of its use.

In the case of a little girl 11 years old I used chrysorobin unguentum, Fowler's solution and the violet ray. This was all the treatment with regulation of diet, and was cured after two months' treatment. Exposure to the rays of the sun or one of the various forms of arc lamps is of value in psoriasis.

CYSTIC ODONTOMA

W. EDWIN BIRD, A. B., M. D., Wilmington.

Bone cysts, a few years ago considered relatively rare lesions, are now being encountered more and more frequently. This is true of both the long and short bones. In the former they are found most frequently in the femur and humerus; in the latter in the jaw. Of these jaw cysts we shall consider briefly those commonly designated as dentigerous cysts. This term is more or less a misnomer, since some of them are not strictly-speaking "dentigerous" in that they spring from epithelial debris and do not contain dental formations. Hence the term cystic odontoma is preferable.

No satisfactory classification of these cysts has yet been made, and can not be made till we know more about them, especially about their pathology. It is very difficult to secure a specimen that permits of a thorough study. However, the classification of New, of the Mayo Clinic, is perhaps as satisfactory as any yet proposed. He divides them into simple cysts, and adamantinomas. The simple cysts are further divided into two groups;—type A, commonly called dental or root cysts, and type B, commonly called follicular cysts.

SIMPLE CYSTS OF TYPE A (DENTAL OR ROOT CYSTS)

These are the most common cysts of the jaws. The generally accepted theory of their genesis is that of Malassez, who discovered masses of cells around the roots of adult teeth, and considered them the remains of the embryonic dental ridge. He called these masses "debris epitheliaux dentaires" and declared his belief that all cystic odontomas arose from them. This is probably true of type A cysts but it is debatable whether type B cysts arise from these masses.

Type A cysts may be found in either jaw, generally in the upper, and in the incisor and bicuspid regions; sometimes in the molar. They may occur at almost any age:—the average at onset is 15-20. They grow to the size of an English walnut: occasionally, in the lower jaw, they are the size of an orange. They have a smooth mucous membrane covering in the mouth. Their wall consists of a thin shell of bone. The interior of the cyst is lined with a thin fibrous capsule next to the bone, and imposed upon this, a thin epithelial layer. This epithelium may be missing if the cyst is old, or very large, or infected.

SIMPLE CYSTS OF TYPE B (FOLLICULAR CYSTS).

These cysts may be due to Malassez' cell-masses, or, as Bland-Sutton suggests, they represent simply an expanded follicle. They occur in either jaw, generally in the bicuspid or molar regions. The age of onset is that of the second dentition, except those in the molar region, when the age of onset averages 30-33. It is similar to type A in size and in that the mucous membrane covering in the mouth is smooth: the wall consists likewise of a thin shell of bone, and the inner lining consists of the same two layers, a fibrous and an epithelial one. The striking difference between Type A and Type B is that in the latter a permanent tooth is missing from the set and a partly-formed one is found in the cyst cavity. The crown is generally matured, but the root only partly so. Occasionally all the teeth are accounted for, in which case the cyst has developed around a supernumerary tooth, although the common finding with supernumerary teeth is a cyst of type A. By that I do not mean that the supernumerary tooth is in the cyst: the cyst simply represents the aberrant development of the supernumerary anlage.

ADAMANTINOMAS.

These tumors, partly solid and partly cystic, are relatively rare, there being only 90 odd cases in the literature up to 1915. Of these Bloodgood reports 12 and the Mayo Clinic 8, the rest for the most part being reported from European clinics. It is obvious then that we on this side of the water are a little delinquent either in diagnosing or in reporting our adamantinomas. Very likely we are simply lazy scriveners.

Adamantinomas may occur at any age, though they are distinctly lesions of middle life. The average age at onset is 30-33. Their origin is either in Malassez' cell-masses, or in an excess of enamel organs, as proposed by Falkson, or, according to Bland-Sutton, they spring from oral mucous membrane. They occur most frequently in the lower jaw,

being seen 11 times there to once in the upper jaw. They are commonly found in the molar or bicuspid regions, and are very rarely seen around the anterior teeth. Often they attain considerable size and involve the ramus and the entire body, even extending across the mid-line to the other side of the jaw. However, for the most part, the tumor will be found at the angle of the jaw, extending only partly into the ramus and partly into the body. This is due to the fact that the lower third molar is the most difficult to erupt and the most frequently impacted tooth of any in the mouth. They have a smooth mucous membrane covering in the mouth unless infected, when ulceration is common and is particularly dangerous, since epithelioma sometimes develops. The wall consists of a thin shell of bone, and palpation may elicit crepitus in places and fluctuation in others. When large these tumors may be very painful owing to the pressure of the enclosed fluid. This is in marked contradistinction to the simple cysts, where generally the deformity, and not the pain demands attention. On cross section they present solid and cystic areas. The solid areas are reddish in color and appear somewhat granular. Microscopically these areas consist of a fibrous stroma and columns of epithelial cells: columnar, polygonal, and stellate. By karyolysis and disintegration, these stellate cells liquefy, forming minute cysts, which grow till they may attain the size of an English walnut.

DIAGNOSIS.

The diagnosis of these cystic odontomas is usually not difficult if a good history be taken, a careful examination be made, and a clear X-ray be obtained. The plate will show a simple cyst, a cyst with dental remains, or a diffuse destruction of bone with multiple cysts. The differential diagnosis between this condition and giant-celled sarcoma is some times most difficult and may not be made till operation or even microscopic section. As a rule, however, the spiculation of bone from sarcoma can be deciphered by a competent roentgenologist, if the plate be clear. The history will differentiate it from chronic phosphorous poisoning or actinomycosis, or gumma of the jaw even without an X-ray. The plate itself will rule out practically all other conditions except sarcoma and myeloma.

TREATMENT.

Treatment of simple cysts of type A consists in drilling into the cyst, thorough curetting, and packing with gauze. Simple cysts of type B require the above, and in addition, sometimes demand resection of the jaw, or at least the chiselling away of the cyst wall till the jaw bone is reduced

to its normal contour. Adamantinomas always require, if operable at all, wide resection of the jaw, since they recur if even a small area be overlooked. In dealing with these, as with all forms of malignancy, Halstead's old rule still holds good—i. e., "In dealing with malignant disease, the most radical thing you do in the beginning is the most conservative thing in the end."

CASE REPORT.

About eighteen months ago I was consulted by a woman of 37, single, and a cigar-maker, who complained of a swelling of her lower jaw on the left side. This swelling was first noted when she was 17-18 years old, and had grown very slowly since then. There had been occasional attacks of a dull, aching pain. Two years before I saw her she had had what was considered an abscess of the root of the second molar, which was incised, but the drainage persisted. A little later the first and second molars were extracted, but the pus still continued to discharge intermittently. Ten months before consulting me an abscess formed at the angle of the jaw, which was incised, but the result was a persistent sinus. The pus pocket, wherever it was, would fill up, causing great pain, then empty itself in 4-7 days, and then would follow a period of quiescence while it filled up again. The longest such period was seven weeks. On examination, the swelling of the left lower jaw was quite noticeable—a diffuse swelling without any markedly localized deformity. The bone was diffusely enlarged almost from the condyle to the bicuspid region. There was the opening of the persistent sinus a little below and anterior to the angle. Inside the mouth, the first and second molars had been extracted, while neither wisdom tooth had yet erupted. The mucous membrane was everywhere smooth, but a pinpoint opening was found at the site of the second molar, from which an occasional drop of pus exuded upon pressure. The diagnosis was made tentatively, but was not certain without an X-ray, since it might have been a periostitis (post-typhoid), a mild osteomyelitis, or a slowly-growing giant-celled sarcoma, since the infection clouded the history and the findings. Refusing the X-ray from fear, the best I could do was to try to clear up the infection with bi-weekly injection of a 2 % solution of formalin in glycerin, with an occasional injection of 5 % argyrol. There was improvement under this treatment, the patient going fourteen weeks without any pus discharging. However, when after nearly six months of such temporizing tactics the pus again appeared, I refused to treat the patient further unless she consented to have the X-ray

taken, an ordeal she reluctantly agreed to meet. The plate was fairly clear and confirmed the tentative diagnosis made when the case was first seen. From near the condyle almost to the bicusps, the bone is diffusely enlarged by a multilocular cyst with very thin bony walls, and in one compartment of the cyst is the third molar, impacted against the remains of the root of the second molar. Its crown seems almost normal, but the roots are deficient. At the top of the same compartment is the tract through which the pus issues. From the plate one would hazard the guess that the pus is confined almost exclusively to this one compartment. The plate also shows faintly the remains of the roots of the first and second molars.

The patient, who was afraid of an X-ray machine, has so far refused operation, but I am informed she has about decided to submit at last. I hope so, for I would like to show you, later on, the X-ray of the reformed jaw.

* Read before the New Castle County Medical Society, May 16, 1916.

Miscellaneous

THE PHYSICAL CAUSE OF THE DEATH OF CHRIST.

Sir William Turner, the distinguished British anatomist and Sir Alexander Simpson, M. D., after careful study of the circumstances attending the death of Christ, have given us the benefit of their conclusions checked by their large pathological experience.

St. John relates the piercing of the side with a spear, and states that this was not done until after Christ was dead, and after the soldiers had parted His raiment among themselves. The expression that from the wound "forthwith came there out blood and water" has led to some discussion on the immediate cause of the death of Christ. That which most commends itself is the explanation given by Dr. Stroud, which has been energetically supported by Sir Alexander Simpson, that in the agony the heart, or one of its great arteries ruptured into the bag enveloping the heart, into which the blood escaped. Sir William cites several cases of rupture of the heart and of the great artery which he has personally examined, in which the pericardial bag was greatly distended and the blood had separated into clot and watery serum. The statement which has been made by some writers

that this separation does not take place when the blood flows into the pericardium, is therefore incorrect, for the clot in such a case forms a cake surrounding the whole or the greater part of the heart and remains for days without undergoing decomposition. If the pericardium were to be pierced shortly after the rupture by a sharp weapon, such as a spear, both blood clot and watery serum would escape from the wound. That the blood and water at the crucifixion, as has been surmised by some, had been derived from a bleb formed on the outer surface of the body and evacuated through puncture by the spear, and not from within the chest, is a wild conjecture, altogether unsupported by evidence.

Artists conventionally represent the spear-thrust as aimed at some point on the right side. Sir Alexander Simpson calls attention to Rubens' Crucifixion, in Munich, in which an exception to the conventional rule is noted by him.

NOVOCAIN NOT UNDER HARRISON LAW.

Novocain, a synthetic chemical, was recently determined by a jury in the United States Court, in New York, before Judge William I. Grubb, to be without the prohibitory provisions of the Harrison anti-narcotic law in that it was not a derivative or compound of opium or coca leaves.

Novocain is a local anesthetic, extensively used by physicians and dentists. It is imported and dispensed throughout the United States to professional men by the Farbwerke-Hoechst Company, of which Ex-Congressman Herman A. Metz is president.

Mr. Metz, when in Congress, took an active part in the passage of the Harrison act, which was designed to prevent the increased use of habit-forming drugs.

Under a ruling of the Treasury Department that any synthetic substitute for cocaine was taxable under the Harrison act, the Farbwerke-Hoechst Company paid, under protest, to the Collector of Internal Revenue, the tax required by the act and then brought an action for the recovery of the same, in order to demonstrate that Novocain, Holocain, Orthoform and Anaesthesin were not derivatives of coca leaves or opium, and that they contained no cocaine and no habit-forming drugs.

The case was tried for two days before Judge Grubb and a jury, during which the Farbwerke-Hoechst Company called notable chemists, surgeons, dentists and pharmacologists, who testified to the chemistry and non-habit-forming qualities of Novocain.

There was no contradiction of the medical, chemical or dental testimony as to the non-habit-forming qualities of

Novocain and as to its chemical dissimilarity from opium, coca leaves and their derivatives.

CESARIAN SECTION.

In 1879, Felkin, an African traveler, witnessed a Cesarian section performed by the natives in the heart of Uganda. The woman was held in a reclining posture by two men. At her side was a gourd of banana wine, and she was half drunk. The operator stood at her left. First he washed his hands in banana wine, then he washed the belly with the same—active antiseptic measures. With a short curved knife he made one incision through the belly, right into the uterus and quickly delivered the child alive, an assistant holding the uterine incision open by hooking his fingers into it. By uterine massage, the placenta was expressed and hemorrhage controlled. Several bleeding points were cauterized with a hot iron. The cervix was dilated from above with the fingers. The assistants then turned the patient on her side to allow the blood to drain out of the peritoneal cavity, the intestines being retained by a square of plaited twigs, after which the belly was sewed up with pins and figure-of-eight sutures. The pins were made from bamboo stick, the sutures from reed fibres. The wound was covered with a paste made of aromatic herbs. The patient recovered in 11 days, having run a mild febrile course. Without doubt, this operation must have been performed for many centuries for the technique to be so perfectly developed.—DeLee, Illinois Medical Journal.

RATIONAL FAMILY LIMITATION AND WAR.

The N. Y. Sun declares, without any real intent to further the birth control propaganda, that "the only way, clearly, for the anti-war fanatic to guard his children surely against war is to have no children." Of course, the Sun simply overstates the indication. Havelock Ellis and other thinkers believe that limitation of the birth rate is the surest preventive of war. Over-populated countries have to expand, and expansion means aggression.

We note from an exchange that Yale is to adopt the full time instruction in medicine, whereby the medical and surgical teaching staffs avoid private practice and give their entire time to teaching and to medical work. This makes the third medical school to adopt this plan, the other two being Johns Hopkins and Washington Universities.

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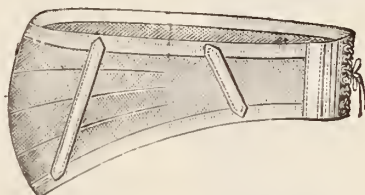
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*Osler states: In 183,526 cases of diphtheria treated in 150 cities previous to the use of antitoxin, the mortality was 38.4. Since the introduction of the antitoxin treatment, records of 132,548 cases show a mortality of 14.6; and leaving out those cases which did not receive serum injection, the mortality is reduced to 9.8. It is estimated that without antitoxin there would be, in the United States, over 64,000 deaths yearly from diphtheria, while the mortality has been reduced by the use of antitoxin to less than 15,000 in the United States alone. This means a saving of over 49,000 lives a year.

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915 Washington Street
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THE STATE MEETING.—The 127th annual session of the Delaware State Medical Society was held at the New-Century Club, in Milford, October 9th and 10th, and was a success. The business of the society was transacted by the House of Delegates on the evening of the 9th, with practically a full House, plus several other confreres as onlookers. No radical business was put through, no wrangling took place, though there were honest differences of opinion, no contests were heard, and no reputations were blasted. A synopsis of this meeting by the State Secretary will be found in this issue, together with the reports of the finance and auditing committees. At the conclusion of this meeting, all present were invited to an informal reception at the home of the Doctors Marshall, where a most delightful hour was spent.

The regular session was held the following morning, beginning with an invocation by the Rev. R. K. Stevenson, pastor of the Methodist Episcopal Church, followed by an address of welcome by Mr. George B. Hynson, School Commissioner. The State Secretary then read the report of the House of Delegates, and was followed by the report of the retiring president. The scientific papers were next in order.

Dr. Cecil Harbordt, who was scheduled to read a paper on "Intestinal Putrefaction," was unable to attend. The first paper read was by Dr. Charles H. Frazier, of Philadelphia, on "The Modern Conception of the Surgery of Pituitary Disease," and was most interesting and instructive, being profusely illustrated by lantern slides. The other paper was by Dr. William Wertenbaker, of Wilmington, on "Caeserean Section," in which an advanced position was taken, yet one in accord with the most recent work of our leading teachers. This paper was accompanied by specimens and photographs.

Following this, the Society proceeded to the election of a president, the honor falling unanimously to Dr. James Beebe, of Lewes. The meeting then adjourned to the New Windsor Hotel, where the annual banquet was held.

In retrospect, as said above, the meeting was a success from the standpoint of attendance, Wilmington outdid the rest of the State, yet the lower counties had a creditable representation. But the meeting is subject to two criticisms, and serious ones. First, the lamentable *scarcity of papers*. When sparsely settled states like Nevada, Arizona and New Mexico, with very few more physicians than we have, can hold a three-day session, with 30 to 50 papers, representing practically all the medical and surgical specialties, we almost feel ashamed of Delaware when the best she can do apparently is a three-hour session, with 2 papers, and one of them contributed by an out-of-state writer. Shame on us! Let us see to it that this thing never happens again. Our men are not back-woodsmen; we firmly believe that for skill and knowledge we can hold our own with Arizona, etc. And yet, to all outward appearances, we do not. Are we going, next year, to let the world continue to think that we in Delaware are medical outcasts, knownothings, or mugwumps? Think it over: are we?

The second criticism is a corollary of the first. After a paper is read there should be a *discussion*, in which the salient points may be emphasized or criticized. After our two lonely papers were read, there followed a typical Miltonic "silence audible." The author of the paper on Caeserean section was disappointed that there was no discussion, as there were several things a discussion would have developed that the paper, for lack of space, could not. As to the paper on the pituitary, no discussion was possible, owing to the misdirected hospitality of one of his hosts, who whisked the author away immediately to explore the city and sundry places of interest therein. We feel sure the author meant no discourtesy to his audience, and we feel equally sure that the host was actuated by only the kindest of intentions, but

we would suggest to both that in the future they have a little more regard for the eternal fitness of things.

So much for the retrospect. The prospect is, we believe, distinctly better. If we all attend our monthly county meetings, read papers and discuss them, consider clinical reports, etc., we will be ready to prepare a program for Middletown in 1917 that will be vastly superior to any meeting our State Society has yet held. We must have an awakened local society in each county before we can have a real live State society. Instead of holding our meetings in a perfunctory routine way, let us try to make them mean so much that no member of the profession will wilfully absent himself from a single one.

NURSES AS ANESTHETISTS.—Some subjects of interest in other states may possibly be of little interest to use here, but the question of anesthesia is one that interests us all. Hence, we take the liberty of presenting an editorial from the Ohio State Medical Journal on this subject, which in that State is just now a very acute one. We hope the profession, the various boards, and the legislature of this State will see to it that if any action or law is necessary to prevent such a crisis from ever occurring here, that such action or law will be procured at the earliest moment possible. The Ohio editorial is as follows:

Administration of anesthetics rather suddenly has become an important subject of discussion in Ohio. Charges have been made that persons who are not licensed physicians have been violating the state law by administering anesthetics, and a movement has been launched to bring about a test case to determine whether such practice is legal.

The Ohio State Medical Board on August 9, adopted the following resolution:

"Whereas: it has been charged in a petition, signed by many well-known and reputable physicians, that the law regarding the administration of anesthetics by others than licensed physicians has been systematically violated by Lakeside Hospital, Cleveland, Ohio, and that courses in anesthetics are given nurses in Lakeside Hospital for the purpose and with the intent of violating the above mentioned law, therefore,

"Be It Resolved that until these charges are disproven and such courses, if given, discontinued, that all recognition of the Lakeside Hospital as an acceptable Training School for Nurses be withheld and recognition of its graduates as Registered Nurses shall be denied."

Despite the fact that this resolution affects only Lakeside Hospital, its adoption immediately caused wide comment

throughout the state. The Cleveland Hospital Council authorized its secretary, Mr. Howell Wright, to arrange for a hearing before the medical board in order to protest against any interpretation of the law that would bar nurses from this field. Inasmuch as the Ohio Hospital Association is deeply interested in this subject, its members likewise asked to have a hearing on the matter. The board immediately granted these requests and set the hearing for Monday, October 2.

At a recent meeting of the Interstate Association of Anesthetists, a resolution was adopted declaring that the association "bring to an end the administration of anesthetics by unlicensed persons in every state in the middle West in which such action can be secured."

Following the adoption of this resolution, a petition, which had been circulated in the larger cities of Ohio, was presented to the Ohio State Medical Board, requesting the board to instruct its secretary "to institute proceedings to test the legality of the administration of anesthetics by nurses (unlicensed individuals) in the state of Ohio."

"We request this action," the petition continued, "for the following reasons:

"1—Because the administration of anesthetics by nurses is a violation of the existing Medical Practice Act, and has been so held by a former state's attorney-general, Mr. Timothy Hogan.

"2—It is an infringement on the rights guaranteed licensed practitioners who are specializing in this vital branch of surgery.

"3—This abuse is becoming more and more prevalent, and, unless stopped at once by the activity of your Honorable Board, will precipitate a very unpleasant situation in the Ohio State Medical Association.

"4—The use of nurses as anesthetists in some of the prominent hospitals and clinics of the State of Ohio is an economic menace to the profession and hospitals in general as it enables certain surgeons and hospitals to compete with their confreres and rival institutions in an unfair monetary manner.

"5—Such action on the part of your Honorable Board will be in conformity with action being taken or contemplated by the State Medical Boards of Kentucky, Georgia and Pennsylvania; by the New York Society of Anesthetists before the New York Legislature and by the Interstate Association of Anesthetists before the State Boards and legislatures of the Middle West.

"6—The use of nurses as anesthetists is prohibited by law in England and the United Kingdom, Germany, Austria,

France, and, in fact, practically every country of the world.

"7—State Supreme Courts in the United States have upheld verdicts allowing excessive damages to the estates of decedents dying under the administration of anesthetics by unlicensed administrators.

"8—The Industrial Commission of the State of Ohio restricts the administration of anesthetics by other individuals.

"9—There is nothing in the nurse's registration law that confers the privilege of administering anesthetics upon registered nurses; in fact, the law was passed with the understanding that such action was prohibited."

According to a recent statement by Dr. F. H. McMechan of Cincinnati, the Interstate Association of Anesthetists requested action on the part of the medical board against Lakeside hospital "as the chief source of the nurse-anesthetist abuse." Dr. McMechan is secretary of the association."

"Evidence is being accumulated regarding violations of the law by nurses, independent of hospital affiliation," he declared, "and this evidence will be submitted shortly to the state board for testing the legality of the administration of anesthetics by individuals, in the courts."

The question is a broad one and we predict that it will be very difficult to settle. The practice of using nurses for the work has developed in recent years, and action by the association of anesthetists was not unexpected.

As Lakeside Hospital operates one of the largest and most proficient nurse training schools in the country, the withdrawal of recognition by the board precipitated a rather serious situation.

The Ohio law specifically provides that the administration of anesthetics shall be limited to licensed physicians and dentists.

Hospital executives who are opposed to the enforcement of the law under this interpretation point out that a literal construction of the statute would compel very considerable changes in many Ohio hospitals.

For example, they point out that under this construction no interne who is not registered in this state—even though he be a graduate of a medical school and licensed to practice in another state—will be allowed to give an anesthetic. It is understood that such internes now give anesthetics in a number of hospitals.

They point out further that no surgeon will be allowed to select a nurse or surgical assistant (other than a licensed physician) as his assistant to give an anesthetic under his

direction. They add that medical students undergoing hospital training who now give anesthetics in some hospitals will be barred. This they say will conflict with the new trend of medical education, which sanctions a year's internship preliminary to graduation. A prominent surgeon made this inquiry of the writer: "How can a college which requires the internship year send a student to a hospital in this state to get that work, if the student is barred from assistance in the anesthetic department?" The student cannot be graduated until he gets his hospital service, and he cannot be licensed until he has graduated. An interne who cannot assist in anesthesia would be almost useless."

It readily can be seen, therefore, that many subjects must be taken into consideration before a solution of this knotty problem is reached.

ADDRESS OF WELCOME*

By GEORGE B. HYNSON, Milford, Delaware

Mr. President:

To me has been assigned the pleasant duty of extending to your organization a very hearty welcome to Milford. Individually it is a pleasure to greet you, but as a body you stand for something more than a society with whose members intercourse is pleasant and elevating. Officially we recognize in you a body of men representing an ideal, and that ideal is the conservation of the public health.

To a layman it appears that the ethics surrounding the several professions is broadening; or perhaps the application is more general and comprehensive. The professional man may now do something for the public service without exciting the suspicion that his motive is self-advertising. The profession is no longer satisfied with curing the evils that flesh is heir to; it has assumed as its duty the obligation of delving into the problems of the origins of disease and of warning the public of the penalties which are visited upon those who do not live in harmony with nature's laws. In the dissemination of knowledge you are brave enough to keep people from being sick, thus depriving yourself of revenue. In order that we may measure this altruistic spirit, let us imagine the legal fraternity, by general con-

*Read before the Delaware State Medical Society, at Milford, Del., Oct. 10, 1916.

sent, setting out to inform the public as to the fundamentals of law and advising them how to keep out of court!

In this broader field, in which the physician recognizes not only an obligation to his patients, but an obligation to serve humanity, is an opportunity for the exercise of all of your powers, natural and acquired. The public is yet woefully ignorant of the principles of right living. Quackery has been discouraged, but not exterminated. The American people are spending on an average of nearly a dollar a head per annum for patent nostrums, that in most instances do no good, but are actually harmful. We cannot say that the public has been informed and, hence, must take the consequences. Millions of dollars are spent each year to persuade the ignorant and the unsophisticated that some "old Indian remedy" will cure everything from chilblains to tuberculosis. This misinformation can be offset only by persistent education, dictated by those whose business it is to know the facts. Suppose you are accused of doing this for your own advantage. The physician who can't afford to ignore that criticism is to be pitied, and possibly deserves it.

You have given much to the public that has never been suitably acknowledged, and for which you have had no financial reward; but the public expects even more. I have in mind a public service that just now needs prophets and agitators, and you alone are qualified for the job. I do not know how many children there are in the public and parochial schools of Delaware; but I do know that it costs a vast sum of money for public education, because a great percentage of our school children are not physically fit. Teachers are attempting to pound arithmetic into the head of a boy with an abscessed tooth; to teach to a girl reading with defective vision; to inspire a youth with adenoids and enlarged and inflamed tonsils with the ambition to attain a place at the head of his class. I do know, because it has been tried, that if you go into a school and put every pupil in the best condition of health possible you will increase the efficiency of that school at least twenty per cent. If that is true, as taxpayers, we must recognize that for every dollar we spend in education, twenty cents is wasted.

What is the answer? It is that some provision must be made whereby every child shall undergo a physical examination periodically, and receive proper treatment, if necessary, before entrance into the schools. The details will be easily arranged when we awaken to the importance of the matter; and you gentlemen can arouse the public to the imperative need of action along this line.

Gentlemen, the public has greater confidence in the

medical profession than ever before, and it is because you have earned that confidence. It pays you the compliment of asking you to lead on, realizing dimly that there are other heights to conquer, and you are the ones to lead the way. You are welcome to Milford. Come again!

Summary of the State Meeting

At the 127th annual session of the Board of Councillors and House of Delegates of the Delaware State Medical Society, the following business was transacted:

Roll call showed the following to be present:

President, George I. McKelway.

Secretary, G. W. K. Forrest.

Councillors, H. W. Briggs, James Beebe.

Delegates: George C. McElpatrick, H. L. Springer, John Ball, Dorsey W. Lewis, William H. Speer, Joseph W. Bastian, G. Frank Jones.

The reading of the minutes of the last session were read and approved. On motion, duly seconded, the following nominating committee was appointed by the president: H. L. Springer H. W. Briggs and James Beebe. The committee made the following recommendations which were approved by the House of Delegates:

First Vice-President, John Ball.

Secretary, G. W. K. Forrest.

Treasurer, Samuel G. Rumford.

Councillor, James H. Wilson.

Delegate to the A. M. A., Willard Springer; Alternate, H. W. Briggs.

Trustee of Medical Journal, G. Frank Jones.

Committee on Scientific Work: H. F. Manning, P. S. Downs and W. E. Bird.

Committee on Public Policy and Legislation: Meredith I. Samuel, L. A. H. Bishop and J. H. Hammond.

Committee on Medical Education: H. G. M. Kollock, Joseph B. Waples, Jr., and John W. Clifton.

Committee on Necrology: Taleson H. Davies and Roscoe Elliott.

The ten names to be presented to the Governor for his selection of three to serve as members of the Delaware State Board of Medical Examiners, were as follows:

James Beebe, James A. Draper, G. Frank Jones, Dorsey W. Lewis, Samuel M. D. Marshall, Roland G. Paynter,

Samuel C. Rumford, William H. Speer, Harold L. Springer, William Wertenbaker.

Dr. H. W. Briggs, as the delegate to the National Association of State Medical Examining Boards, made a brief report praising the efforts of the late president of the A. M. A., Dr. Rodman, toward increasing the standard of the various state medical examining boards as well as his endeavors for the establishment of the National Board of Medical Examiners.

The reports of the separate county societies showed varied degrees of activity, Kent having had no meetings for the past year, New Castle having regular monthly sessions with fair programs and good attendance, while Sussex was very hopeful of a successful year coming.

The following report of the auditing committee was accepted:

We, the auditing committee of the Delaware State Medical Society, have examined the accounts of the treasurer, as herewith appended, and find the same correct, there being a balance in bank of \$479.58; as well as a medical defense fund in the Wilmington Savings Fund Society of \$213.00.

Respectfully submitted,

GEORGE I. MCKELWAY, President.

G. W. K. FORREST, Secretary.

JAMES BEEBE.

HENRY W. BRIGGS.

TREASURER'S REPORT.

1915.

1915—Balance in hand	\$ 488.70
10-15 Kent County Dues	12.00
10-15 Sussex County Dues	60.00

1916.

1- 8 Dividend	17.50
7- 8 Dividend	17.50
7-10 County Societies Dues	327.00
9-27 Kent County Dues	3.00
10-30-'15 Interest	4.01
4-29-'16 Interest	4.47

\$ 934.18

1915.

11- 4 Mrs. M. C. Repp	\$ 17.25
11- 4 Hotel DuPont	50.10
11- 4 G. W. K. Forrest	5.00
11- 9 Julian B. Robinson	7.75
12-21 Star Publishing Company	60.00

1916.

1-13 Julian B. Robinson	4.50
2-15 Star Publishing Company	15.00
4-29 Star Publishing Company	15.00
6- 5 Julian B. Robinson	9.00
6- 6 Star Publishing Co., January & February..	30.00
7-10 Wilmington Savings Fund Society (Medical Defense Fund)	213.00
9-14 Star Publishing Co., March & April	30.00
10- 9 Bank Balance	479.58
	\$ 936.18
Check No. 80 not returned	2.00
Total	\$ 934.18

Respectfully submitted,

SAMUEL C. RUMFORD, Treasurer.

On motion, duly seconded, the Delaware State Medical Journal was continued for the next year.

On motion, Middletown, the second Tuesday in October, 1917, was selected as the next place of meeting.

All bills, when approved by the finance committee, were ordered paid. House adjourned.

Dr. James Beebe of Lewes, was elected President for the ensuing year as the last order of business in the open session on October 10.

SICKNESS INSURANCE

At present there is a discussion on the advantages of sickness insurance on the voluntary and obligatory bases. The former is practiced to a greater or lesser extent in countries that wish to distinguish themselves by their so-called "democratic government"; the latter, by countries under a "paternalistic government" as typified by Germany.

The idea of insuring against sickness and other contingencies has been practiced in various ways in different countries. In England the Prudential Assurance Co., London, has been operating since 1848, voluntary insurance policies to provide for burial, for descendants of a deceased person and for old age. The payment is made weekly which requires a great deal of personnel and time. The high mortality of the insured, 40-90%, necessarily made premiums

high and showed the necessity of a stricter selection. In spite of the above difficulties the company till 1910 had twelve million policies and had collected a fund of 17 million pounds. Work along similar lines has been done by friendly societies in Great Britain. In the U. S. the voluntary insurance movement has been carried on sporadically and to a limited extent by labor unions, fraternal societies and benefit societies connected with industrial establishments. No comprehensive or concerted action toward sickness insurance has yet been started.

In Germany a sickness insurance office is supported by weekly premiums, the maximum being 15-½ cents (U. S. Currency) corresponding to daily wages of at least 82-½ (U. S. Currency). In return, the office has to provide the sick with medical care, medicines, sick benefit and in case of death, a death benefit dependent on the amount of wages, is paid.

In 1889 a law requiring insurance against invalidity or old age was passed in Germany for working men, laborers, apprentices, domestics, commercial and clerical employes, sailors on ships on sea or rivers, older than 16 years, and with ending wages or salary of less than \$500. The premium does not exceed 7-½ cents per week. Every insured person who has paid his premiums regularly at least during 200 weeks has a right to a pension if he has lost his working capacity (not through accident) or when he reaches the age of 70 years. The pension does not exceed \$47.80 per year. The average amount of the contributions paid by the insured, of which the employer pays one half, is about \$5.00 per year.

In Germany the obligatory sickness insurance plan has proved to be the most powerful factor in tuberculosis prevention. (Arnold C. Klebs, M. D.) It was found that in certain industries 50% and more of the working men are suffering from tuberculosis and sooner or later would have their earning capacity reduced and finally themselves become disabled. These would heavily tax the sickness insurance fund and therefore preventive measures had to be instituted as a matter of self-defense pure and simple. To return the insured as soon as possible to earning capacity, to prevent invalidism became a simple business proposition for the insurance office.

Hence there was real interest in providing extensive and appropriate preventive measures. To start with, sanatoria were established and in 1906 there were about 100 of them in Germany. The incurable cases were segregated in hospitals not under the sickness insurance office on a contract basis of payment. Observation stations (Genesungs-

heime) were established for cases between the curable and the incurable. Convalescent camps provided places for quick recovery of patients treated in the sanatoria. Open-air rest camps (Erholungestatten) were opened for run-down working men who were predisposed to tuberculosis. Information and advice stations (Fursorgestelle) were opened to give instructions to patients about tuberculosis and the work of the insurance office. Forest schools were established for predisposed children. Visiting nurses kept a close watch of the health of the home and the family.

COMPARATIVE RESULTS: There are no data available of the results obtained by institutions operated on a voluntary insurance plan. They are of the most varied character. Sickness insurance was a side issue with them; it seldom has been their prime object.

Under the obligatory plan there was paid in Germany for the benefit of the insured from 1885 to 1903 nearly three hundred million dollars. By an extensive preventive and sanatoria treatment 70 to 80% of the tuberculosis workers were returned to working capacity. In 8 years the invalidity insurance office took care of 101, 806 tuberculosis patients (an average of three months for each case) at a total expenditure of about 9 million dollars. 90,000 of these patients were taken care of in the sanatoria of the insurance office.

In democratic countries marked individualistic tendencies will not countenance with favor anything savouring of paternalism or government coercion; hence obligatory insurance may be considered anti-constitutional or anti-national. Besides this, the already established voluntary insurance companies in U. S. shows that they are very expensive. Only agencies and collections cost 26% of the premiums. The adverse selection of insurers will force a premium, high and even prohibitive, and hence outside of the reach of the masses. The simulation likely to be practiced in a voluntary plan will need a large body of personnel. Hence the voluntary plan resulted in great many cases in financial failures.

At first the compulsory plan was taken with some objection by the masses, but in Germany "compulsion" implies the recognition of a responsibility which rests on all citizens alike. Even in republics mandatory laws are enacted where the public health, safety, or weal is concerned. The minority must bow to the majority's need. The compulsory plan has centralized the campaign against tuberculosis as described above. It has reached most effectively the laboring classes. On the claim of the premium, benefits are obtained not as

privilege, charity or philanthropic gift, but as a right to be demanded.

Dr. J. W. Schereschewsky, U. S. Public Health Service, in speaking of industrial sickness insurance, concludes as follows:

“1. Industrial sickness is an economic necessity in modern social evolution.

2. The basis upon which industrial insurance should rest is the prevention of illness and physical disabilities.

3. Frequent periodic physical examinations of workers constitute the logical means by which defects and diseases can be detected in their incipency.

4. The scope of such examinations should be extended to include home as well as factory conditions.

5. Industrial insurance based upon preventive measures should redound greatly to the benefit of society.

(a) by reducing the annual loss of the time through illness;

(b) by establishing hygienic standards;

(c) by establishing minimum hygienic standards for industries;

(d) by favoring the enactment of uniform industrial legislation;

(e) by increasing the efficiency of local health authorities.

6. The cost of carrying industrial insurance based on preventive principles should be less than that of the present systems.”

That the compulsory sickness insurance plan is likely to prove the more effective than the voluntary is seen in the conclusions reached in a later study by Surgeon B. S. Warren as applied to U. S. conditions:

“The study in the experience in the field of sickness insurance shows practically unanimous conclusions that the following provisions are necessary to the success of any plan:

1. It must be compulsory, especially for those with small incomes.

2. Cash benefits not to exceed 66 2/3 per cent. of the wages for a period of not more than 26 weeks in one calendar year.

3. Invalidity benefits elastic in character.

4. A small death benefit sufficient to meet the ordinary expenses of burial and other immediate necessities.

5. Medical benefit to include medical and surgical relief in home, hospital or sanatorium as necessary, and medicines, appliances, and specialist service, including dentistry.

The following relative to contributions, while not conceded by all are believed to be most equitable by most eco-

nomists, public health authorities, and law-makers who have studied the subject in its broad relations:

1. The fund to be provided by contributions as follows:

Insured persons 50 to 66 2-3%

Employers 33 1-3 to 50%

Community or State 10 to 25%

2. The amount of weekly contributions has not been very definitely determined, but it is believed that a total of 50 cents per person per week from all sources will provide the following:

(a) \$1 per day for disability due to sickness and non-industrial accidents, to begin on the fourth day and not to exceed 26 weeks in one calendar year.

(b) \$200 death benefit for deaths due to sickness and non-industrial accidents.

(c) Adequate medical and surgical relief.

The provisions must be made for changing the amount of contributions from year to year to adjust the funds to the hazards of the industry and prevent the accumulation of an unusual surplus or deficit in any fund.

On question of administration there does not seem to be much difference of opinion as to the following provisions:

1. The administration must be democratic, and employees must have a voice in control in proportion to their contributions.

2. The insured persons must have a feeling of ownership and responsibility for the proper conservation of the funds.

3. An efficient medical service must be provided and closely related to the public health authorities, so that the clinical and preventive medical benefits may yield the best results.—*Philippine Islands Medical Bulletin*.

Miscellaneous

A school of hygiene and public health is to be established by the Rockefeller Foundation in connection with and as a part of Johns Hopkins University. It is designed primarily to benefit health officers and those who intend to give their lives to the administration of scientific sanitation. It is expected that the school will be opened about October 1917, as it is estimated that it will take about a year to erect and equip a suitable building and gather together the staff of teachers. Dr. William H. Welch, of Johns Hopkins, will be the director of the school.



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Editorial

Abdominal Caesarean Section

By William Wertenbaker, M. D., Wilmington

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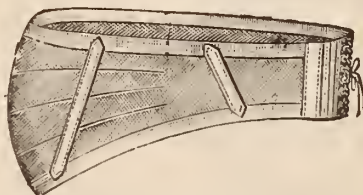
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907 Delaware Ave.
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Business Manager

DR. J. W. BASTIAN

915 Washington Street
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Assistant Editors

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No. 13

SUPERSTITION NUMBER.—It seldom falls to the lot of an editor to print No. 13 on a monthly journal, yet this is what is to be found on this issue. We do not presume to be a modern Caesar Augustus, with power to change the calendar at will—we are simply arranging to have our “volume year” coincide with the calendar year, and since we cannot alter the latter, we perforce resort to changing the former. We do so at this time because we fear that the superstitious will scruple over the matter less at Christmas time than at any other. No. 1 will appear in January.

THE GENERAL PRACTITIONERS.—In this age of specialization in the medical profession the one class of men who have not effected a special organization for their particular specialty is that of the general practitioner. We may be taken to task for calling these men specialists, yet that is what they are to a large degree even now, and becoming more so as time passes. As medicine recognizes certain men as dermatologists, pediatricists, neurologists, psychiatrists, etc., and as surgery distinguishes certain other men as orthopedists, ophthalmologists, urologists, gastro-enterologists, etc., it becomes at once apparent that the further

this division of labor is carried, the smaller the field becomes for the general practitioner, till at last he becomes *ipso facto* a specialist too. Due not to their sense of elation at this unique position, but rather to a feeling of resentment over various brands of unfair treatment and criticism at the hands of other specialists, there is now on foot a plan to form the American Society of General Practitioners, whose objects are apparently both offensive and defensive. We see no reason why this society should not soon be a most potent factor in the medical field, should its organization be effected. The only valid objection to its formation is that the profession already suffers from an excess of societies and associations. Why not join the American Academy of Medicine or the American Association of Physicians? However, should the A. S. G. P. really eventualize we will wish it luck. This new society is not to be confused with the "Medical Society of the United States," of which we will speak more at length in a later issue.

BIRTH CONTROL.—To many of us the subject of birth control is as new as the latest dogmata of eugenics, and yet the idea has been in print for 118 years. It is the direct outcome of the Malthusian Doctrine, which declares that population increases faster than the means of subsistence. Thomas Robert Malthus (1766-1834) in 1798, in an "*Essay on the Principles of Population*," tried to solve the problem of reproduction by advising married people to abstain from intercourse. This method, being irrational, naturally failed, but James Mill, in the *Encyclopedia Britannica*, edition of 1818, was the first to publicly advocate the prevention of conception in intercourse, and in 1830 Robert Dale Owen in his *Moral Physiology*, actually described methods for accomplishing this object. In 1848 John Stuart Mill, in his *Principles of Political Economy*, espoused Malthusianism, a feeling reflected also by Darwin, Spencer and Huxley. In 1876 Edward Truelove was arrested for selling the *Fruits of Philosophy*, written by Charles Knowlton, M.D., of Boston, in 1833—but Charles Bradlaugh and Annie Besant leaped into the fray, the English courts were beaten, and two hundred thousand copies of Dr. Knowlton's book were sold, while Mrs. Besant wrote the *Law of Population*. Dr. Henry Arthur Allbutt, of Leeds, wrote the *Wife's Handbook*, which contains a practical chapter on the prevention of pregnancy. He was soon stripped of his medical honors, the General Medical Council declaring that the low price at which the handbook was sold, brought it within the reach of everyone, to the detriment of public morals; had the doctor charged 6s. instead of 6d. for his pamphlet, he would

have been permitted to retain his M. R. C. P. E., but evidently the poor are not supposed to receive the same knowledge as the rich, at least in England. With the exception of Dr. Knowlton, who belonged to another generation, of all the American pioneers only one was a physician, and an irregular at that: Dr. Foote was an eclectic, and he never read the code of ethics of the A. M. A., and the same applies to his son, Dr. Edward Bond Foote, who in 1886 published a splendid essay on *Borning Better Babies*.

At the present time, hardly a physician individually denies the desirability, or even the necessity of some sort of birth regulation, yet the profession collectively presents the sad spectacle of being afraid or ashamed to put their official approval upon a movement they nearly all espouse. In 1912, Dr. Abraham Jacobi, in delivering the presidential address before the American Medical Association, proclaimed the crying need of teaching the people the proper satisfactory means of limiting their offspring. What action was taken upon this urgent question? Nothing, but a golden opportunity was allowed to slip ingloriously by. In 1915 Dr. W. J. Robinson wrote his *Limitation of Offspring*, but the publisher left blank Chapter XXVIII, the all-important one containing the methods of preventing conception, because he feared Section 211 of the United States Criminal Code, which provides that for distributing information on this subject there is a penalty of five years in prison, or a fine of five thousand dollars, or both.

And in the meantime, until such a time as our benighted legislators quit enacting legislation on medical subjects without expert medical advice, we are all forced to witness the birth of the swarms of the poor, whose offspring begin to die before they are fully born; we are forced to witness the birth of the puny spawn of the venereal leper, destined to a life of handicaps and hardships; we are forced to witness the birth of the unfortunate progeny of the consumptive and the epileptic; we see mothers becoming chronic invalids from too-frequent child-bearing; we see the man of moderate means refrain from marriage because he cannot regulate the number of his children; we see parents who are wrecks from coitus interruptus, we attend the accidental parents of undesired offspring; we attend the woman who aborts whenever she is impregnated; we attend the woman to whom pregnancy means death—we are parties to all these social and economic crimes and what do we do about it? Absolutely nothing! The subject seems taboo so far as official action by the medical profession is concerned. And yet something is being done towards repealing the class legislation that prevents the poor from

learning what the rich already know and practice, but the pity of it is that the movement has to rely on lay journals—the *Chicago Tribune* and the *Pictorial Review*—to carry on the propaganda that rightly belongs to our profession. These journals, especially the latter, are bringing this matter before the public, in the hope that some member of Congress may see the light and introduce a bill to repeal Section 211.

That birth control is not a myth or a fantasy is evidenced by the following extract from a recent editorial in the *Chicago Tribune*:

"After years of prosecuting men and women engaged in the propaganda for birth control the British government finally appointed a commission of distinguished physicians, clergymen and others to look into the matter. At one of the hearings Dr. C. V. Drysdale, secretary of the Malthusian league, told what government approval did for birth control in Holland. In 1885 a Dutch branch of the league was established and ten years later it was recognized by a royal decree as a society of public utility.

"With the aid of a corps of physicians and trained midwives work was begun among the poor in every city in the kingdom. People in remote districts communicated through the mails. Pamphlets giving instructions were sent in reply. Assurance had to be given that the inquirer was married or about to be.

"The result of this has been, so Dr. Drysdale assured the commission, that the excessive birth rate had been diminished on eugenic lines, bringing with it a considerable rise in wages and general prosperity. Amsterdam and The Hague had become the healthiest large cities in the world, according to government statistics. While the birth rate has decreased among the poor the increase in population in general is now the highest in western Europe and the stature of the people has increased four inches within the last half century.

"Dr. Drysdale asserted that the increase in Great Britain's population is diminishing, not because of a decline in the birth rate, but because of the policy of suppressing information about birth control from the poor, and taxing the middle and upper classes to support the large families of the less fit, thus leading those two classes to practice more largely family limitation. He prophesied that the Holland system would in five years' time remove the evil from which Great Britain, particularly England, was suffering and that the country's prosperity would rapidly increase.

"Advanced thinkers now recognize that increase in population depends upon the power of supporting rather

than creating new people, and that the increase of a country's population has no relation to its birth rate. No matter how much an increase of population is needed, it will not come by an increase in the birth rate, but by an added production of the country.

"Great Britain has at last begun to see the truth of this, and the testimony before the commission proved that it was a problem for the upper classes who had to bear the burden of supporting the increase of the unfit, and, in defense, set about limiting the increase in their own classes. A distinguished physician's opinion was that as soon as this economic pressure was removed from the well-to-do there would be an increase in their families.

"This is one of the problems which will have to be confronted by Europe after the war. Any attempt to control birth will be opposed by sentimentalists, but the stern facts are there for any one to see."

What has been accomplished by birth control in Holland; what seems to about to be accomplished in England, can also be accomplished in America. While the conditions of living are infinitely better here than in war-ridden Europe just now, we have ample justification to proceed in our own behalf without waiting for further proof of the practicability of birth control. Europe may swing the pendulum the other way, and legalize polygamy for a term of years, as has been proposed repeatedly; Europe may even sanction trial marriage, in an effort to replenish her male population; and yet it seems to us that the rebuilding of Europe depends not so much on more men, but better men. The peculiar problems of Europe are not ours, thank God, but we all see enough trouble right here, so far as our births are concerned.

Delaware with her two Senators and one Congressman has proportionally the largest representation in Congress of any State in the union; according to her population she is entitled to one-fourth of a Senator and two-thirds of a Congressman. Delaware also has a small and fairly compact medical body. Is it not possible for these two elements to get together and give Delaware the signal honor of initiating in Congress the legislation needed to place before the people who need it most the necessary advice about birth control?

ABDOMINAL CAESAREAN SECTION*

By WILLIAM WERTENBAKER, M. D., Wilmington.

It was my original intent to present only the histories of the seven cases of abdominal Caesarean section which I have performed in the past three years. Realizing, however, that case reports are but dry records, I have prepared an outline of the history, indications, contra-indications, prognosis and technique of the operation, and shall read only a synopsis of these cases.

I have nothing original nor startling to present, but this subject is one of ever present interest and it would seem proper that we review it at recurring intervals, and keep abreast of the best thought in regard thereto.

In every physician's experience a case demanding Caesarean is apt to occur and, just because it is rare, to be overlooked.

There exist, even today, some misconceptions as to its proper field, not uncommon being an idea that it should be resorted to only after efforts at other methods of delivery have failed.

HISTORY.

There is, probably, no other operation performed upon human beings around which clusters more of interest, tradition and misinformation than the removal of the infant from its mother through the abdominal and uterine walls.

It is popularly believed that the name was derived from the accidental birth of Julius Caesar in this manner, his mother having been gored in the abdomen by an angry bull. Like many another interesting legend, this is highly visionary, the name probably coming from the existence of a Roman law (*lex caesarea*) to the effect that the abdomen should be opened and the uterus emptied in all women who died at, or near, term.

DeLee attributes the origin of the name to the Latin term *partus cesareus* from the verb *cedere*, to cut.

According to Bauhin, the first of these operations performed upon a living woman was in 1500 at Sigerhausen in Switzerland, by a castrator of pigs, one Jacob Nufer by name. Williams expresses his belief that this was not a true Caesarean operation, but the removal of an extra-uterine pregnancy, and he attributes the first authentic case to Trautmann, of Wittenburg, in 1610.

* Read before the Delaware State Medical Society, Oct. 10, 1916.



CASE I



CASE II



CASE III



CASE IV

Until 1876 the operation was advocated and performed by various workers but with a most appalling mortality. Porro, at that date, advanced the operation which bears his name and much improved results followed its employment in certain cases.

With the advent of asepsis and Sanger's suggestion (1882) that sutures be used to close the uterine incision, the conservative operation was revived with steadily improving results. Today, when done under favorable conditions, the maternal mortality should not be greater than that of other abdominal operations and the foetal deaths less than in spontaneous births.

INDICATIONS.

This operation is not a cure for all the ills to which the parturient woman is heir, nor, on the other hand, should it be relegated to the field of last resort procedures. There exist for its performance more or less clearly cut indications and the ability to recognize these should be an essential part of the equipment of all who attend obstetrical cases.

This is comparatively easy at times, but the so-called border line group demands much nicety of judgment in making an early decision for, or against, section.

Broadly put, I have no hesitancy in stating that, with mother and foetus in good condition and the latter visible, the operation should be *considered* whenever delivery by the normal route is fraught with grave dangers to either.

Most clearly defined are those cases in which there exists such a disproportion between the size of the maternal pelvis and the foetal head that it cannot be overcome by the malleability of the latter; thus the great indication is furnished by:

I.—Contracted Pelves.—These may be divided readily into three groups: (a) The absolute, or all cases with a diameter at the inlet of 6 c.m., or less, in which no other form of delivery is possible; (b) The elective, or those cases with a diameter at the inlet of 8 c.m., or less and more than 6 c.m., when the child is alive at, or near, term, and the mother in good condition. Here delivery of a living child by any other method is practically impossible. Pubiotomy will effect delivery of a very small infant with a diameter as low as 7.5 c.m., but should be reserved for those cases where labor has progressed to the point where Caesarean would be hazardous for the woman. Craniotomy should not be resorted to unless the child is dead or in a precarious condition; (c) The relative, or so-called "border line" cases having a diameter at the inlet of more than 8 c.m. and less than 10 c.m. This is naturally the largest group and unfortun-



CASE V



CASE VI



CASE VII

ately we can lay down no hard and fast rules to guide us. The pelvic measurements give but one factor in the equation, the others depending upon the size and malleability of the foetal head and, in a measure, upon the force of the uterine contractions. The same woman may in one labor have a spontaneous delivery and in another require such radical measures for a pelvic extraction as to jeopardize her life and her infant's more than would a section. Much also depends upon the condition of both the mother and the child in reaching a decision. In considering craniotomy, however, it should be borne in mind that it deliberately sacrifices the foetus and is accompanied by a high maternal mortality. In this border line group Bumm advises internal podalic version, asserting that it is safer for the mother than Caesarean section or pubiotomy; but this statement is open to question and furthermore the foetal mortality is too high to allow it to be regarded in any other light than that of an emergency procedure when done for this indication. Contractures of the pelvis at other planes than the inlet have also to be reckoned with. A diameter of less than 8 c.m. at any pelvic plane demands a careful analysis of the case before allowing it to progress in labor.

II.—Mammoth Child.—Although equivalent to a pelvic contracture, it is worth while to consider as forming a class unto itself those cases in which the maternal measurements are normal, but the foetus has reached such size as to render a delivery through the pelvis impossible or highly improbable. Usually they occur among the "well-to-do" in primiparae who have gone past term and are far more common than is generally supposed. Many instances of still-born forceps delivery belong in this category.

III.—Foreign Growths.—Foreign growths sufficiently obstructing the passages may furnish an indication for Caesarean section: Cancer of the cervix, fibroid tumors, broad ligament cysts, prolapsed ovarian cysts, osseous tumors of the pelvis or even extensive and rigid cicatrices of the cervix and the vagina may so obstruct labor as to require extraction by the supra-public route. Fixation operations previously performed upon the uterus or previous Caesarean may also, at times, be an indication.

IV.—Eclampsia.—When eclampsia occurs in a primipara at, or near, term, with an undilated, nondilatable cervix and the convulsions cannot be controlled by other means Caesarean offers the best hope for mother and child. Vaginal hysterotomy, the so-called vaginal Caesarean section, is proposed for these cases and is the method of choice between the 27th and the 35th week, but when the child has reached term the abdominal route is to be preferred.

V.—*Placenta previa*.—Central or even partial placenta previa in the primipara with a thick rigid cervix is one of the most fatal of all obstetrical anomalies. When done early, before exsanguination, section will give better results, I am convinced, than any of the older methods.

In both of these last named conditions the operation is done primarily in the interest of the mother, but it should be borne in mind that it has the additional advantage of affording the child a better chance for life than any other method of delivery.

In the multipara, however, where the cervix is softer and more easily dilated the operation is not indicated for eclampsia or placenta previa.

Such satisfactory results are achieved by intelligent use of dilating bags, or manual dilatation, followed by version and extraction that we could not hope to improve upon them by resorting to section.

In rare instances the operation may be indicated for accidental hemorrhage (*abruptio placenta*), prolapsed cord with rigid cervix, and certain malpositions, such as an impacted mento-posterior position.

The age of the patient and the history of previous labors should receive consideration whenever Caesarean section is contemplated for the relative indications. A woman of forty with a history of previous still-births might require section, whereas a young primipara with otherwise the same indications could be allowed the test of a labor.

Rupture of the uterus with escape of the foetus into the peritoneal cavity or a tubal pregnancy are indications for immediate operation, but such cases are not classed under the head of Caesarean section.

CONTRA-INDICATIONS.

When any other method of delivery is possible, the operation is contra-indicated with a deformed, premature, dead or dying foetus.

As will be discussed under prognosis, the outlook for the mother is unfavorable when she is in poor condition from exhaustion, hemorrhage or much interference, or where infection is already probable.

Rupture of the membranes, while not a positive contra-indication, renders the operation more dangerous in any given case.

PROGNOSIS.

The predominating factor in the prognosis of Caesarean section is the stage in labor at which the operation is performed. When done under favorable conditions prior

to, or soon after, the onset of labor the maternal mortality should be virtually nothing and the infant has a better chance for life than with a spontaneous delivery.

But as we include cases in which the membranes have ruptured, labor has progressed to the second stage, repeated vaginal examinations made or unsuccessful efforts at delivery attempted we find the death rate steadily rising.

During the past ten or fifteen years the average gross mortality has been about 7 per cent.; but upon analysis we find that in most clinics the death rate has varied from about 1 per cent. or 2 per cent. when done early to as high as 35 per cent. when undertaken late.

The following table clearly bears out these facts (figures several years old) :

	Gross	Before Labor	Early in Labor	Membranes Ruptured	Late in Labor
Leopold	6.2%		3.3%		
McPherson	16.15%		4.8%		
Green & Newell	8%		4.8%		
Routh (deLee)					
(1282 cases)	9.7%		2%-4%	10.8%	34.3%
Davis, Asa B.	10.7%				
Williams		1%-2%		10%	

Thus the danger increases in direct proportion to the progress of labor and the amount of interference to which the patient has been subjected.

OPERATION.

For the average case I much prefer the technique perfected and employed by Dr. Asa B. Davis, of New York.

When time allows the patient is prepared as for any other abdominal operation: The bowels are opened, the mons veneris and vulva shaved, the entire abdomen scrubbed with green soap and water, washed off with alcohol and ether, which is followed by a 1-1000 solution of bichloride of mercury. A dressing wet with the same solution is applied and allowed to remain until the time of operation when it is removed and the abdomen painted with a 4 per cent. solution of iodine. The bladder is catheterized. Ether is employed for anesthesia.

If time is pressing these preparations are carried out after the patient is under the anesthetic and upon the operating table.

A longitudinal incision, 10 c.m. in extent, is made in the mid-line of the abdomen, its lower angle reaching to a point just above the umbilicus. The intestines are packed off above with gauze pads wet in a sterile salt solution and a continuous strip of gauze is then placed around the entire

field of uterine exposure, between it and the abdominal wall.

The assistant here places his hands upon each side of the abdomen, well back, and makes steady pressure in such manner as to force the uterus up into the abdominal opening.

The anterior uterine wall is now incised in the mid-line for a distance of about 12 c.m., care being taken to avoid opening the membranes.

Should the placenta be encountered it is pushed to one side.

Passing the right hand through the incision, the operator quickly separates the membranes from the interior of the uterus. While carrying out this manœuvre the location of the anterior knee is determined and, after the separation has been completed, it is grasped and delivery of the child effected after the manner of internal podalic version with extraction, a finger of the left hand inserted in the mouth of the infant aiding in its delivery.

At this stage of the operation an ampoule of pitutrin or sterile ergot is administered hypodermically.

A second assistant clamps the cord at two points a short distance from each other and quickly severs it between them. He should remove the child at once to an adjoining room and devote his entire attention to it, so as not to distract the operator and his aids.

Two long traction sutures, of number 1 chromic gut, are next placed just above and below the upper and lower angles respectively of the uterine incision, tied and their ends caught in haemostatic forceps.

The first assistant now for the first time relaxes his pressure upon the sides of the abdomen and receives these two traction sutures from the operator, by means of them maintaining the position of the uterine incision just within the abdominal opening.

The placenta is usually found lying loose in the uterine cavity. If separation has not occurred spontaneously, it is gently peeled away from its site with the fingers and transferred, with its attached membranes, to a sterile vessel.

The uterus is now freed of clots which may have formed within its cavity.

Two rows of stitches are used to close the uterine incision; the first consisting of interrupted sutures of number 1 chromic gut, placed about 8 c.m. apart; each of these is made to enter from the peritoneal surface of one side, include a generous portion of all the muscle layers, but avoids the decidua, and emerges at a corresponding point upon the other side. After all these sutures have been placed, they are

very carefully tied with a double knot and their ends cut short.

This entire line of closure with its knots is then covered over by a running suture of number 1 plain gut, which is carried alternately from side to side, and includes the peritoneum reinforced by a few fibres of muscle tissue.

All sponges are now removed, the abdomen cleansed of any blood or liquor amnii which may have seeped into it and the uterus dropped into the pelvis. The intestines are lifted out of the pelvis and the omentum tucked down behind the uterus.

Closure of the abdominal incision is made in three layers, number 0 plain gut being used for the peritoneum, number 1 chromic gut for the fascia and the skin closed by a sub-cuticular stitch of silver wire.

An ordinary laparotomy dressing is applied and the patient removed to her bed.

The usual obstetrical binder is omitted.

Advantages rightly claimed for the high incision are:

First.—Almost complete freedom from danger of subsequent hernia.

Second.—Freedom from adhesions between the abdominal and uterine incisions, since the lower angle of the former is above the upper angle of the latter.

Third.—Greater facility in control of bleeding.

Fourth.—Lessened shock, since the uterus is not delivered from the abdomen and there is almost complete freedom from handling of the intestines.

Fifth.—Lastly, the general simplicity of the operation.

When it is known beforehand that some secondary operation is to be performed within the pelvis, such as removal of the ovaries, tubes or uterus, it is more convenient to make the incision below the umbilicus.

Should this not be discovered until after the abdomen has been entered fair access may be obtained by enlarging the incision downward a few centimetres.

Many methods, some of them almost fantastic, have been suggested and employed for the performance of the Caesarean operation: Transverse incision of the abdomen, transverse incision of the uterus, and oblique incision of the abdomen just above Poupart's ligament, with dissection between the layers of the broad ligament (an extra-peritoneal route) has each had its advocates.

Within the past few years numerous attempts have been made to revive some form of extra-peritoneal Caesarean section.

Drs. B. C. Hirst, J. W. Markoe and W. R. Nicholson, of American obstetricians, have described and employed virtu-

ally the same technique for a trans-peritoneal method which has decided merits. Essentially it is as follows:

Low median incision of the abdomen, separation and incision of the parietal peritoneum; incision and separation of the visceral peritoneum from the lower anterior face of the uterus; suture of the two peritoneal layers together and then incision of the uterus followed by extraction of the child.

The uterine incision is closed in two or three layers, the peritoneum then whipped together and the abdomen closed as usual.

A modification of this operation is done entirely extra-peritoneally. The peritoneum is not incised, but is separated by dry dissection from the posterior surface of the abdominal wall, the bladder and the lower, anterior face of the uterus. The bladder is then pushed to one side, the uterus entered and the foetus extracted by forceps or version. Its results have not been satisfactory as the peritoneum is usually torn and not infrequently the bladder lacerated.

The field of application for these methods is in those cases which come to the hand of the operator late in labor or already infected.

DISADVANTAGES.

Numerous objections are raised to Caesarean section, the four most often heard being:

First.—That it is an operative procedure, whereas labor by the pelvic route is a physiological process.

Second.—That it is a very dangerous operation.

Third.—That it leaves a permanent scar in the uterus which in itself furnishes an indication for subsequent section—"Once a Caesarean always a Caesarean."

Fourth.—The horror in which it is held by the laity.

In answer to the first of these objections, the operation is not proposed for those cases where labor is to be a normal process, but to meet or avoid, distinctly abnormal conditions which exist or it is known will arise during labor.

Secondly, when undertaken in time, it is almost devoid of danger to the infant and more mothers survive than where recourse is had to high-forceps, craniotomy and pubiotomy.

Objection three is, and always will be, the greatest drawback to this method of delivery and limits its field. However, it should be remembered that considerably more than half of all Caesareans are done for markedly contracted pelves and therefore it follows as a corollary that the same indication will exist with each succeeding labor as was present in the first.

When done for some one of the other indications, such as eclampsia, this does not necessarily follow, but the patient should always be under close observation during the latter weeks of pregnancy and should enter the hospital immediately upon the onset of her pains.

The fourth objection I have not found it hard to overcome; in fact, it is surprising how readily patient and family will respond to a careful statement of the case.

In presenting these cases I shall give only an outline of the records; the complete histories you will find upon the desk and I shall be pleased to have any of you look into them more fully.

For these cases I am indebted to Drs. Briggs and delacour of Wilmington, Dr. Robin of Wilmington, Drs. Davidson, Fleming and Lummis of Penn's Grove, N. J., Dr. Herbert Bates of Millington, Md., Dr. Booker of New Castle, and to my colleague, Dr. Willard Springer.

Case No. 1.—Date 6-23-14; age 19. Para I. Previous deliveries, none. Month of gestation, 10. Indications, contracted pelvis (rhachetic); diagonal conjugate 9 c.m., true conjugate 7 c.m.; Presentation, vertex; Operation, high incision, Caesarean; Complications, stitch abscess; Out of bed, day; Discharged, 31st day. Results—baby lived, mother recovered.

Case No. 2.—Date 2-7-15; age 18. Para I. Previous deliveries, none. Month of gestation, 10. Indications, eclampsia-rigid cervix; diagonal conjugate 11 c.m., true conjugate 10 c.m.; Presentation (twins), vertex-breech; Operation, high incision, Caesarean; Complications, broncho-pneumonia; Out of bed, 13th day; Discharged, 15th day. Results—babies both lived, mother recovered.

Case No. 3.—Date 4-23-15; age 15. Para I. Previous deliveries, none. Month of gestation, 10. Indications, generally contracted funnel pelvis; diagonal conjugate 10 c.m., true conjugate 8 c.m., transverse at outlet 7 c.m. Presentation, vertex; Operation, high incision, Caesarean. Complications, none; Out of bed, 17th day; Discharged, 28th day. Results—baby lived, mother recovered.

Case No. 4.—Date 12-8-15; age 17. Para 1. Previous deliveries, none. Month of gestation, 10. Indications, generally contracted pelvis; diagonal conjugate 9.8 c.m., true conjugate 8 c.m. Presentation, vertex; Operation, high incision, Caesarean. Complications, broncho-pneumonia; Out of bed, 17th day; Discharged, 23rd day. Results—baby lived, mother recovered.

Case No. 5.—Date 3-11-16; age ? Para III. Previous deliveries, one, premature, spontaneous; one, still-born, instrumental. Month of gestation, 11. Indications, general-

ly contracted pelvis; diagonal conjugate 9.8 c.m., true conjugate 8.5 c. m. Presentation, vertex; Operation, high incision, Caesarean. Complications, none; Out of bed, 12th day; Discharged, 20th day. Results—baby lived, mother recovered.

Case No. 6.—Date 5-24-16; age 41. Para XV. Previous deliveries, all abnormal. Month of gestation, 10. Indications, contracted pelvis (high promontory); diagonal conjugate 9.5 c.m., true conjugate 8 c.m. Presentation, vertex; Operation, low incision, double salpingectomy, Caesarean. Complications, none; Out of bed, 12th day; Discharged, 18th day. Results—baby lived, mother recovered.

Case No. 7. Date 7-5-16; age 21 (same patient as Case No. 1). Para II. Previous deliveries, Caesarean. Month of gestation, 9½. Indications, contracted pelvis (Rhachetic), (previous Caesarean); diagonal conjugate 9 c.m., true conjugate 7 c.m. Presentation, vertex; Operation, low incision, supra-vaginal hysterectomy, Caesarean. Complications, none; Out of bed, 15th day; Discharged, 20th day. Results—baby lived, mother recovered.

I have purposely omitted any account of vaginal hysterotomy, the so-called vaginal Caesarean section. It is a different operation done for a different set of indications.

Although no claim is made for extensive research, I have freely consulted works on this subject and acknowledgement is hereby made of this fact. Especially am I indebted to the writings of Drs. J. Whitridge Williams, Asa B. Davis, deLee and Bumm, and to the two former for the inspiration and instruction received from them in the past.

NOTE—Since the above article was written the author has interviewed Case 2 (indication, eclampsia), and learned that on Jan. 1, 1917 she was delivered spontaneously of a full-termed child; midwife in attendance.

Also,

Case 8—Date, 12-28-16; age, 27. Para II. Previous delivery, one spontaneous. Month of gestation, 10th. Indications: anterior fixation with worked antelexion of uterus, combined with malposition of fetus. Diagonal conjugate, 10.7 c.m.; true conjugate, 9 c.m. Presentation, lumbar. Operation, high incision, Caesarean. Complications, none. Out of bed, 11th day. Discharged, 15th day. Results—baby lived; mother recovered.

DISCUSSION.

Dr. George I. McKelway, Dover: Permit me to say that more years ago than I like to recall I knew in Philadelphia an old physician, Dr. Robert P. Harris. He had independent means and a small practice, which he did not nour-

ish and which did not nourish him, and he was a natural born statistician. In his reading he came across within reasonable time of each other the record of two or three cases in which women had been delivered by horn ribs in the abdomen. They had been in the last months of pregnancy and had expelled the foetus. With his taste and instinct for statistics he began to look that matter up and he collected somewhere about 40 such cases. Now the mortality from Caesarean section up to that time had been enormous, something like 40 or 50 per cent. Dr. Harris tried to put two and two together, which most people never try to do, and he found that in these horn ribs the mortality was exceedingly small, something like 3 per cent. And he said "Why this difference?" and argued thus, that the mortality in cases of Caesarean section was almost always due to sepsis; that it was due to sepsis because the woman was permitted to go into labor and be examined and handled and forceps used and all that sort of thing before Caesarean section was resorted to and as the sections showed was practically dead before the Caesarean section was made, whereas in the case of horn ribs of cattle the woman had not been infected and decent attention to the external wound resulted in the woman's recovery. He published a paper. It revolutionized the whole outlook of Caesarean section. Caesarean section had become a practically back number. It resumed its place in medicine. Prominent men in America took it up, Dr. Howard Kelly among the first. Cases of Caesarean section done before any manual interferences, before the woman is infected by forceps or fingers, the mortality today is not exceeding 5 per cent. in any decent hands. It shows what observation amounts to. I have done or assisted in 14 of them. The lesson of the doctor's paper is just this: That every physician (if I may begin at the very beginning of things) should have a pelvimeter, know something of the use of it and know how to interpret what it reveals and that the woman whose delivery is impossible should not be tinkered with and all sorts of attempts made to deliver her before she is sent somewhere to be operated on by Caesarean section and Caesarean section should always be an operation of election. At a time that is close to that when the woman should be delivered she should be delivered, without waiting for her to go into labor, by Caesarean section.

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By Llewellyn Eliot, M. D., Washington, D. C.

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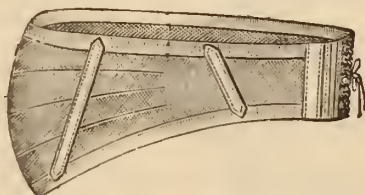
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A MEDICAL LIBRARY—WHY NOT?

Owing to the peculiar geographical situation of Delaware, and especially of its metropolis, it is easy to see why in the past, a medical library has never been developed here. It is easy to comprehend why, with such world-renowned medical centers as Baltimore and Philadelphia so close to us, and with our own population so small, there was small occasion and smaller impetus for the founding of such a library. However, we can no longer remain in the provincial state in matters medical that has hitherto been our case—Wilmington is now a city in the 100,000 class, and for that reason if for no other, a start must soon be made for expansion in all things pertaining to medicine.

One of our hospitals has within recent years, greatly enlarged its facilities—at an outlay of \$150,000; a second has within recent months completed a fund of \$70,000 for additional facilities; while the third has within recent weeks raised a fund of over \$100,000 towards an entirely new and modern plant. These hospital betterments are indicative of two things: first, that our facilities have not kept pace with our increase in population, and second, that

our facilities have not kept pace with the advances in scientific treatment; in other words, we are beginning to realize that our hospital facilities have been delinquent both in quantity and quality, and we are endeavoring to remedy both. Ultimately, despite our nearness to medical centers, we shall have thoroughly modern institutions wherein the most approved and scientific methods prevail, and wherein shall be found facilities for those researches which seem to be the *sine qua non* for fame, or even reputation. If this sounds chimerical, please recall the fact that the Drs. Mago have made the name of a little town of 15,000 souls a synonym for all that is best in medicine and surgery. You reply that Wilmington—or Delaware—has no Mago! True, but neither did Rochester until the facilities and the opportunities were provided. We mention this renaissance of our hospital situation merely to show the already-present unrest and spirit of advancement.

Could any time be more opportune for inaugurating a movement to secure another absolute essential, a medical library? That it is already essential even now no one will gainsay; that it will become more and more a necessity will be admitted by all. This is not a matter for medical sects—it is one for *all* the doctors here to plan earnestly for, and work harder for. One of two ways may be utilized to procure a medical library: (1) The profession alone can buy and house the necessary reference works, or (2) we can put the matter up to the local Library authorities, pledging our moral and financial assistance.

So far as we are aware, this suggestion is made publicly now for the first time. It seems almost like "a voice in the wilderness," for while there are several private medical collections above the average, they are not sufficiently large, recent, complete, or accessible. What we need almost as badly as hospital facilities are facilities for medical reading. We have got to have it sooner or later—why not start now?

THE FEMININE CAUSE IN MEDICINE.

Without entering into the discussion begun some time ago by an eminent physician as to the merits of women in medicine, I would like to remark the absence of the following names from the lists published:

Ann Orexia, Ethyl Chloride, Belle Adonna, Carrie O. Kinesis, Vera Montanum, Anna Phylaxis, Polly O. Myelitis, Rose Acea, Meta Plastic, Sarah Bellum, Ella Phantiasis, Emma Tropia, Molly Cule and Rena L. Calculus.

A HISTORY OF BODYSNATCHING*

By LLEWELLIN ELIOT, M. D., Washington, D. C.

Bodysnatching, resurrecting, night doctors was a pastime in which I was deeply interested and at one time engaged. There were pleasures and fascinations and excitements and risks attending it that were not found in any other phase of the study of medicine; but the passage of the Anatomy Act, in April, 1902, put a partial stop to the game; I say a partial stop, for I believe that bodysnatching still continues, although to a limited extent and for the benefit of a select few.

Medical history records the names of many renowned and respected men who were compelled to steal bodies for legitimate purposes. In 1814 William Cheselden was reprimanded, and no one knew the secrets of the resurrection men better than Sir Astley Cooper.

As far back as 1540 a law was enacted in England allowing the Company of Barbers and Surgeons to have yearly the bodies of four criminals to dissect. The Warburton Anatomy Act in 1832 put a stop to the systematic bodysnatching.

In the early days bodysnatchers were men of the lowest type, murderers, criminals, desperate fellows, who did not hesitate a moment to take any sort of advantage of their opponents; theirs was a business of bread and butter.

I shall not discuss the history of bodysnatching in the earliest days of the game, but will take up the game in modern times, and what I shall say will take us back a great many years; some things I shall draw from tradition, others will be gathered from experience.

We of the present day call bodysnatching a nefarious trade, that bummers, outcasts, derelicts only will engage in, but let me tell you there was never a greater injustice done to a legitimate business; for while there is honor among thieves, there were honor, bravery, generosity and friendship between rival demonstrators. In illustration of this, one night rival demonstrators met in a burying ground, out for the same body, and although strong personal friends they came nearly to shovel blows; when, however, the one

* Read at a joint meeting of the Medical Society and Medical History Club, Washington, May 17, 1916.

proved his rights by priority of arrival, the other waived his claim to the stiff and assisted in the snatching. Another night, rivals scouted about a burying ground to get a body each had located during the funeral services earlier in the day; each party heard the other; each had visions of police officers and station houses, and they sneaked out of the grounds; but in about an hour they returned by different paths; the first arrival was given all the assistance that time would permit.

My father was a bodysnatcher; he was one by reason of his duties as Demonstrator, afterwards Professor of Anatomy. In 1844 he was under Dr. Thomas Miller, Professor of Anatomy in the Columbian Medical College, and he continued until 1849, when he became Professor of Anatomy in the Georgetown Medical Department. In 1861 he was transferred to the Chair of Surgery. Although the duties of bodysnatching were given to another he remained the friend and protector of the legitimate bodysnatcher until his death.

In the early days men went armed and were ready to call "Hands up!" "Which will you take?" that is, a drink or a fight.

In 1856 one of the prominent practitioners of the city had a sister die; he feared the resurrection men, so he begged that her body be left undisturbed.

When the Columbian Medical College was located in the old jail, the Demonstrator gently and quietly and carefully lifted the body of a brother Mason from its final resting place, and promptly entered it in the student class of anatomy. In some manner suspicion was aroused; the Lodge ordered an investigation. The grave was reopened; the committee found the clothing and other belongings in the coffin, but the brother had left for parts unknown. The chairman of the committee visited the Demonstrator and requested permission to make a search of the college; this permission was freely granted. Immediately afterwards the Demonstrator hurried to the college, had a section of the flooring taken up, the body placed, and the flooring replaced. The committee arrived; they were assured most positively that they would not find the body; they searched into every place, but failed to find the body. They left, the flooring was again removed and the body carried to the dissecting table.

The keenest piece of body stealing that ever occurred in this city happened as follows:

A man had died of some peculiar disease; both medical colleges wanted the body and the Superintendent of Washington Asylum knew it. He swore a mighty swear that

neither should have it, and in order to carry out his swear had the body brought from the dead house and placed in his back office. Now, the dead house was a secure place, with windows barred, door locked and chained, almost impossible of burglarious entrance; the body would have been safe there. He thought not. Shortly after dark two students called to spend the evening, for he was a good fellow; in time more came down to see him. He felt complimented, and about ten o'clock went to the kitchen to order supper and other things prepared for his guests. At twelve o'clock the party broke up. But, while he was seeing to the supper the body was lowered from the window into the arms of waiting students and carried away. Our old friend felt jubilant over his success and went to bed a happy and a contented man, but one can imagine his surprise and "what a difference in the morning."

Selden W. Crow got into trouble about 1859 and he was unable to make good after that. Sylvester went so far that he had to give up or get caught.

George A. Christian was a clerk in a Government office; he associated himself with a bad gang—Percy Brown and his sister Maude; Workhouse Kate and Margaret Harrison. They did a big and profitable business. Away out on East Capitol Street, near the old Lincoln Hospital, this gang had a shanty, where they soon accumulated a great quantity of clothing, shrouds, and other graveyard things. It was a security storage until Christian suggested the medical college at 10th and E Streets as a better place for shipment. The suggestion was, in part, adopted. Christian would inject and pack the bodies in whiskey barrels at the college, roll these barrels up in front of the Army Medical Museum, where the express company would call for them; Christian was always on hand to pay charges and direct the shipments; in this way the company did not suspect the fraud. The price of bodies fluctuated with the demand and the weather. When the demand was great it was a common thing to charge one hundred dollars for a good subject; when the market became glutted the average price was 40 dollars. Quite a number of Demonstrators paid a hundred dollars. Shipments were mostly to the South.

Christian was a man of medium build, athletic, strong-muscled, of great endurance, and a good worker in the cause; his hair and beard was black. His clothing was always that taken from the grave; he, therefore, was usually well dressed. His frequent raids and his sullenness when drinking were the causes of his undoing.

On the night of December 13, 1873, he was stopped in the street by Officer McGlue; with Christian were Margaret

Harrison (white) and Charles Green (colored). They had been to Holmead's Cemetery and had a body. All hands were partially intoxicated; Christian refused to answer the questions McGlue put to him; he would give no explanation whatever, so the party was taken to the 4th precinct station house. The charges were: Carrying concealed weapons, disorderly conduct, suspicious character, and every imaginable thing. While they were at the station the Lieutenant sent Sergeant Kneas and Officer Hawkins to Holmead's, and there they found the body of Thomas Fletcher, that had been buried only the night before, dug up and enclosed in a sack. In the search of the prisoners there were found some chemicals, a syringe for injecting, a diary, Colt's service revolvers, and a card of membership to the Young Men's Christian Association made out in the name of George A. Christian.

The papers gave a full account of the arrest; the District Attorney charged Christian with robbing grave yards of dead bodies and disposing of them to medical colleges in different places throughout the country. Dr. George A. Otis recommended Christian's immediate dishonorable discharge from the Government service. This was approved and Christian was out of two jobs.

The diary captured showed much incriminating evidence. This diary was turned over to the Chief of Police and by him it was given to one of his surgeons; it was censored and portions were given out for publication in the city papers. Many names of those who had been out with Christian were, for good and sufficient reasons, omitted. In the Police Court, Judge Snell imposed on him a fine of \$1,000.00 and one year in jail.

Among the entries were the admission, that he had engaged in the exhuming of the body of Beau Hickman and in its horrible mutilation, and that he had put the face and scalp near the steps of the main entrance of the Capitol Building; this piece of business was done in April, 1873, and created considerable excitement; he also made an entry that he had put the scalp and face of another body on one of the gate-posts of the same grounds.

I shall give a few extracts from his record:

January 3d, 1873. "On the 3d, B and C went out and got two cadavers tonight."

September 2d; he gives the names of several places visited during the night and then winds up with:—"It was a lovely moonlight night, and everything went off smoothly."

September 18th. "Called on Dr. ——— this morning, and he promised to let Dr. Schleimer and I furnish his col-

lege with material this winter at \$15 each—we to inject and remove it.”

Christian had his own private troubles, for on “September 19. “Jay Cooke and Co. suspended yesterday, and I was unfortunate enough to have some money in their hands. Went up to see about it today, but everything is closed and no information can be had.”

September 20. “Got a permit from the Board of Health today to bury material from the dissecting-room of college.”

Christian also confessed to being an abortionist in the following: October 4th. “Gave ‘M’ tincture of gentian compound to produce an abortion.” A few days later he records his success.

Business was quite lively in December; work was heavy. Monday, December 1. Visited Potter’s field; shipped two subjects in whiskey barrels to Virginia.”

December 4th. “Visited Holmead’s and Young Men’s grounds and failed.”

December 6th. “Visited Ebenezer, Kate and I, and got subject.”

December. “Visited Holmead’s and Young Men’s grounds and failed.”

It would require too much time to give more extracts from this diary; enough has been quoted to allow one to form an idea of the amount of work done.

One of Christian’s workers was appointed a ward physician, and the death rate of that ward soared very high for the good of the cause.

Percy Brown was a big fellow, a good fighter, and of a very ugly disposition when he was drinking. Maude Pratt was Percy’s sister, or his common law wife, it was never known which; she was a very devil; she married a disreputable dentist just about the time he was dying. Maude was chief mourner at funerals; heavily veiled and decked out in the most sombre looking dress, weeping as though her heart was broken, Maude would accompany the family to the cemetery; she always wanted a few flowers from the coffin of the dead friend; she would by some unfortunate accident drop these flowers near the grave and then report progress. The position of the flowers usually showed the right grave. The last time I saw Maude she was but a shadow of her former self; she was a wreck and nearly blind.

There was a negro preacher; he taught salvation and repentance to the limit on Sundays, buried the dead of his congregation; but the strain on his nervous system was so great that he was compelled to let off steam by stealing the bodies he so faithfully buried.

The Superintendent of the Washington Asylum went out one night to catch the bodysnatchers. He had malice in his heart, but cowardice in his actions. He pinned on his shield, buckled on his revolver and club; then he lighted his lantern, and then, like old Diogenes, went in search of an honest man; that is, one who quietly give himself up for trespass on the Potter's Field. He might just as well have stayed in doors.

Jansen appeared on the scene. Jansen was a dirty fellow, as dirty men go; he was bold, boastful, revengeful. He stole many bodies, kept a record of his doings, kept all letters he received, and showed them to anyone interested sufficiently to read them. I have had a big batch of them in my possession for weeks at a time.

In January, 1881, Charlie Shaw beat his sister so badly that she died under my care. Suspicion pointed to Charlie, and while he denied all knowledge of the affair, he was arrested after her death, convicted of her murder March 29, 1882, and executed by Warden Crocker Friday, January 19, 1883. During his stay in the jail he several times attempted suicide, and once set afire the bed of his cell mate. Shaw's body was not in the ground three hours before Jansen was digging for it. He took it to a medical college; he claimed he was not sufficiently well paid for it and swore to get even. At three o'clock on Sunday morning, the 22d, he was arrested while trying to break in the college door. Collateral was forfeited. During the night of the 22d he engaged a hackman, Johnny Mack, at the old Baltimore and Ohio Depot; he gave Johnny several drinks and they went to the college, got the body and proceeded to Columbian Medical College to sell it; he failed; they then went to Howard University, but Dr. Shadd would have nothing to do with Jansen. Daylight was at hand and Jansen was in a fix as to what to do with the body; he quickly solved the problem so far as he was concerned by making his "get away," leaving poor Johnny in the lurch. More drunk than sober, Johnny drove to the Seventh Street station house, the legs and feet of Shaw dangling out of the hack window. Mack would not give Jansen away, he was willing to take his medicine, but Jansen told on himself while he was in John Shea's saloon down on Maryland Avenue near Third Street. He was boasting of what he had done "last night" and on several other nights; this was heard by a colored man from the alley in the rear of Shea's; he told the police officer on the beat, and Jansen was soon under arrest. When convicted, his remark was that he had "got into trouble for the stiff of a damned nigger." The court gave him one year in jail.

The body of Shaw was carried to the dead house at the

Asylum, and Superintendent ——— swore by all that was good and holy that no one would ever see Shaw again. The weather was bitter cold, the ground too hard for grave digging, so quite a number of coffins accumulated in the dead house. However, a few days afterward the right box was found, opened and the head stolen for a keepsake; I had the skull in my possession a number of years when it disappeared. There was ice in the coffin and in the skull. The skull was taken to the Hospital office, placed in a box lined with plaster of paris, buried in sawdust, then the top of the box securely nailed on; this box was not opened for six months, and during the entire time there was no odor; at the time of opening it, the skin fell away, and the bones were perfectly clean and white.

The grave dug for Shaw about two weeks after his receipt at the dead house was shelved at the bottom and the coffin pushed under the shelf.

Beale came along, but he soon became scared of the work; was afraid of the ghosts of the jail.

No cemetery was held sacred by the old-time bodysnatcher.

I shall not occupy your time nor try your patience much longer, but I will say I do not believe any law will ever stop bodysnatching, and that what Sir Astley Cooper said before a committee of the House of Commons: "There is no person, let his situation in life be what it may, whom, if I were disposed to dissect, I could not obtain. The law only enhances the price, and does not prevent exhumation," is only too true.

I shall not tell how to properly snatch a body, as it might end disastrously for some of the younger men, and then again "lead us not into temptation."

I would suggest the reading of Southey's poem, "The Surgeon's Warning," and Thomas Hood's "Mary's Ghost."

Miscellaneous

DOLLARS AND SENSE.

Every professional man has his tale of woe to tell regarding bad bills. One man, a doctor, claims that during forty years' practice he lost over \$100,000 in this way. As a rule the professional man is paid last. Every one comes before him. And often he is never paid. Here is a man who had the courage of his convictions. Read his solution

of this ever present problem, as presented by the New York Evening World.

"Yes, it required a good deal of sheer moral strength to put my practice upon a cash basis," said a successful dentist recently. "But with me it was simply a case of adopting this plan or of going out of business.

"One day I went over my books and found over \$11,000 in accounts six months past due. And a substantial portion of that \$11,000 represented an actual outlay on my part for gold and other supplies. Well, I saw red for a minute. And it was my indignation that gave me the courage to take the crucial step.

"A new patient entered a few moments later. I looked over his teeth told him that it would cost him at least \$125 to have the work done and calmly informed him that I operated on a cash basis. I'd have to receive \$25 on the spot and the balance in instalments at each visit. The final payment would be made on the last visit.

"He promptly drew his check for \$25 without a murmur. Next day I commissioned my printer to run off several hundred announcements outlining my new cash policy. These were worded as tactfully as possible and yet were firm and unequivocal. I mailed them to my list of patients.

"I lost a few patients, of course, but they were of a type that I was glad to lose. Most of my clientele offered no objection.

"Since that time I have not lost a dollar in bad accounts. And that's some record for a dentist handling my grade of patronage. Furthermore, I have told many of my colleagues of my policy and they, too, have adopted it.

"I estimate that my average annual net income was increased at least \$3,000 by this step."

PREVALENCE OF CANCER.

Cancer is one of the chief causes of death. The annual mortality in the United States is estimated at 80,000, compared with about 150,000 deaths from pulmonary tuberculosis. While the "great white plague" prevails at all ages, cancer is essentially a disease of adult life. At ages over 40 cancer causes one death out of eight among women and one out of every fourteen among men. Of the 80,000 estimated deaths from this disease in our country at all ages during the year 1915, approximately 67,000, or 84.5 per cent., occurred at ages of 45 and over.

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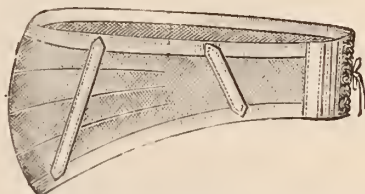
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907 Delaware Ave.
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Business Manager

DR. J. W. BASTIAN

915 Washington Street
Wilmington, Del.

Assistant Editors

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WHAT MAKES THE WORLD GO ROUND?

In the light of recent campaigns, we answer at once—advertising. If old Sol were not advertised to rise tomorrow, we doubt very much if he would; if Jupiter Pluvius were not advertised to appear in April, we doubt if he would; if water were not advertised to flow down hill, we doubt if it would. This “ad” business is getting to be a stupendous one; nothing escapes it; nothing is too small or too insignificant to justify at least one; everything and everybody (except the ethical physician) is advertised. Now, if you will look over the pages of this Journal you will see that we carry very few ads; we could give you the reasons, but you already know them. We want some more, a whole lot more, and we want you to help us to get them. If you, collectively or individually know, or know of an advertiser whose product is suitable for our columns, please let the Business Manager know. Do not send him, in your anxiety to help your own publication get on its feet, a telegram, “collect”; under those circumstances he probably wouldn’t appreciate the tip; but you can write him. We simply must have more “ads,” because we have reached a

period where this Journal must cease to be a mere pamphlet, but must blossom forth as a real, sure-enough medical magazine. If we get the ads, we get the money; if we get the money, we get the magazine. Will you help?

GOOD FOR YOU, DOCTOR.

Medical controversies, like all controversies, are generally "sad affairs." But we rejoice to see a near-controversy that is different. In the New York Medical Journal, Dec. 2, 1916, is an article by Dr. Fishberg, an authority on tuberculosis, in which most heterodox views on infection with and treatment of tuberculosis are stated. These views are so widely at variance with those hitherto held, that it is small wonder that somebody replied to them. It is a source of gratification to us to know that the reply was made by Dr. Albert Robin, of Wilmington. His paper, in the same publication (Dec. 30, 1916) is logical, correct, and dignified; and does credit to the profession in Delaware.

CLINICAL MANIFESTATIONS OF PITUITARY DISORDERS*

Author's Abstract.

BY CHARLES H. FRAZIER, M. D., Philadelphia.

After reviewing the recent contributions to the physiology of the pituitary, Dr. Frazier discussed briefly the several clinical types of disordered function, calling attention particularly to the many departures from the stereotyped clinical picture. In his experiences it has been impossible in many instances to determine before the operation whether the lesion was benign or malignant, whether the lesion was within or without the pituitary body, intra or extra-sellar. The picture of pituitary disease is often so complex that the term dyspituitarism is adaptable to most cases. That is, there are few cases of pure hypopituitarism or pure hyperpituitarism; there may be on the one hand hyper activity of one lobe simultaneous with insufficiency of the other.

The more one sees of the clinical side of pituitary disorders, the more one is struck with the frequent departures from the conventional types, such as the acromegalic and

*Read before the Delaware State Medical Society, Oct. 10, 1916.

the Froelich syndrome: (1) Thus there is the combination of disorders of both lobes and of hyper- and hypo-plastic conditions in the same individual; (2) the absence of any symptoms peculiar to pituitary derangement in unquestionable involvement of the gland; (3) the evidences of spontaneous arrest of the disease in many instances; and (4) the rather unusual occurrence of the full fledged picture of functional disturbance. These clinical observations will be brought out in the lantern demonstration.

In the diagnosis of pituitary disease, one must keep constantly in mind the fact that the clinical picture is extremely varied; that departures from type are the rule rather than the exception. There may be the ocular findings without any evidence of metabolic or skeletal changes; there may be pronounced skeletal changes without any ocular phenomena; sella deformation may be absent in the presence of undoubted pituitary disorder; extrasellar lesions may give all the signs of a primary lesion of the pituitary itself. We have come to attach little significance to the diagnostic value of sugar tolerance, as investigations in normal subjects have resulted in a degree of tolerance far in excess of that previously regarded as within normal limitations.

Dr. Frazier dwelt at length upon the problems involved in the management of pituitary disorders, prefacing his remarks upon treatment with an urgent plea for the earlier recognition of the true nature of the lesion. The majority of the patients brought to Dr. Frazier's clinic showed true optic atrophy so advanced that restoration of vision was out of the question, and it behooves the profession to refer their patients promptly to a competent oculist as soon as there is a suggestion of visual disturbances.

Dr. Frazier went very carefully into the question of glandular feeding and referred particularly to its limitations. In his experience glandular feeding has been more productive in results with children. In adults it is the exception, not the rule, to get a positive response to glandular therapy. Under no circumstances should glandular feeding be continued in the face of advancing optic atrophy. The indications for prescribing the posterior and anterior lobes respectively are not as yet clearly defined. In some instances thyroid extract may be used concomitantly to advantage.

With regard to surgical interference the majority of Dr. Frazier's patients have sought relief because of visual disturbance, and whether the transfrontal route or the transphenoidal route is adopted will depend upon whether we are dealing with an intra or extrasellar lesion. The transfrontal approach, which Dr. Frazier carries out ac-

according to his own technic, gives a splendid exposure and in many respects is the more desirable method of the two, especially when the sella turcica or its expansion has already encroached upon the sphenoidal sinuses. However, the removal of the floor of the sella or the transphenoidal route has the advantage of relieving pressure upon the optic nerve and chiasm and is analogous in principle and effect to subtemporal decompression.

The results of operation are most gratifying when the disease is not too far advanced and the outlook is more favorable than in tumors of the brain itself because a much larger percentage of tumors of the pituitary body are benign. As a rule Dr. Frazier follows up the operation with a course of pituitary feeding.

SYMPTOMS AND DIAGNOSIS OF GALL STONES*

BY PAUL R. SMITH, M. D., Wilmington.

Probably the most prominent symptom of gall stone disease is hepatic colic. This is, however, not met with in all cases of gall stones. In fact, the majority of cases of gall stone disease do not suffer with colic at all. Hepatic colic is caused by the impaction of a stone in a bile duct. The pain is of the most severe type, lancinating in character. The patient usually breaks out in a profuse sweat, often vomits and the pulse is of a running character. The pain is situated in the right hypochondriac region, and radiates to the right shoulder. The exact location of the pain depends on where the stone is impacted. The most common seat of the pain is about two to three inches below the ensiform cartilage and about three inches to the right of this point. Should the stone be lodged in the cystic duct pain is generally most severe just over the gall bladder itself. A stone may pass through the common duct and out into the bowel without becoming impacted and cause neither pain nor jaundice.

Jaundice is another prominent symptom but does not occur in all cases. Should the stone become impacted in the common duct, jaundice would occur. This would come on in from twelve to twenty-four hours after the attack of colic and may be severe or intermittent, depending on the ob-

*Read before the New Castle County Medical Society, April 18, 1916.

struction. There is very often fever, sometimes high, sometimes low, accompanying the jaundice. Often pain and tenderness are present and chills will occur that act very much the same as an attack of malaria would. The gall bladder is much distended, the ducts are dilated and the liver is enlarged and firm. There is frequently severe pain over the epigastrium, accompanied by vomiting. Should the obstruction remain and the ducts become infected the disease takes a much more serious aspect. The fever becomes higher, the chills more severe, and there is greater prostration. Should the stone become impacted in the cystic duct jaundice would not be likely to occur at all, but should it occur, it is as a rule very mild.

The gall bladder is greatly distended very often and pain as a rule is present due to the catarrhal inflammation of the gall bladder. There is a great deal of tenderness over the gall bladder.

Gall stone attacks may come on at frequent intervals for a long time before the patient will consent to an operation. I sent such a case to the Delaware Hospital about a month ago. This woman was about fifty years of age and had been suffering with gall stones for over a year, but had up until that time refused operation. When I first started to attend her she had complained of severe attacks of pain in the epigastrium, accompanied by vomiting. The vomitus was generally of a greenish color; at other times there was just stomach contents. After each attack the urine would be loaded with bile, which would last for a few days and clear up until the next attack. This woman had been an active woman all her life, was a moderate beer drinker and had always had a good appetite. She also had a very stubborn case of constipation. She moved to Dover shortly after I started to attend her and has had attacks at frequent intervals up until her operation. She was sent back to me and I sent her to the Delaware Hospital where Dr. Wales removed fourteen large stones. She is at this time recovering and in first class condition.

The diagnosis of gall stones is made mostly by location of pain and tenderness. In renal colic the pain is situated in the flank of the affected side and gradually works along the course of the ureter. The urine is often stained with blood and scanty and the testicle of the affected side is often drawn up and painful. In intestinal colic the pain is situated around the umbilicus as a rule and is relieved by firm pressure on the passing of flatus. If due to lead poisoning the patient would show the other symptoms, such as wrist drop, blue gum line, etc. In gastralgia the pain is situated in the epigastric region. The patient is often of a neurotic

type. It is often relieved by eating or firm pressure. There are of course no stones passed in stools, no jaundice, and no fever.

Gall stones sometimes also have to be differentiated from a reflex colic which may be due to uterine or ovarian disease, but in this case there would be other symptoms pointing to pelvic disease.

SYMPOSIUM ON CANCER

Held by American Association for the Advancement of
Science, New York, December 29, 1916

SYMPOSIUM ON CANCER, Held By American Association for the Advancement of Science, New York, Dec. 29, 1916

Although radium has produced very important-palliative results in advanced cases of cancer, and has even, in a considerable number of cases, apparently caused a complete disappearance of the disease, yet it cannot be relied upon to effect a permanent cure in the late stages of inoperable tumors, and therefore the importance of early diagnosis of cancer is again emphasized. Such is the essential message from science to the public on the present status of the radium treatment according to Dr. James Ewing, of Cornell University Medical College who took part in a symposium on this disease held recently at the American Museum of Natural History under the auspices of Section K (Physiology and Experimental Medicine) of the American Association for the Advancement of Science. Other papers of special scientific interest were presented by a number of the foremost students of the cancer problem.

Dr. Ewing spoke from his experience with the radium treatment of cancer at the Memorial Hospital with which he is connected as Director of Cancer Research and which is receiving, through the generosity of Dr. James Douglas, a large part of the radium now produced under improved processes by the U. S. Bureau of Mines in co-operation with the National Radium Institute. According to the speaker, the use of radium in cancer has within the last ten years established itself as an excellent method of dealing with benign and malignant tumors of the skin which, when properly applied, it usually removes promptly and with remarkably little scarring. In the major types of cancer of the accessible mucous membranes radium has also achieved considerable success. It has been chiefly tested in uterine can-

cer in which disease it has accomplished radical improvement of many inoperable cases and several apparently complete cures as attested by post-mortem examinations after the patients had died from other causes. A number of foreign surgeons state that their results are better than with surgery and they employ radium in both operable and inoperable uterine cases. The leading American surgeons who are using radium obtain equally good results but take the opposite position that they prefer to operate in suitable cases.

According to the speaker much the same situation exists in regard to many other forms of accessible cancer while a few authorities even report apparent success with such difficult cases as those of the lip, tongue, rectum, etc. "It has become apparent," said Dr. Ewing, "that success depends very largely upon the skill and accuracy of application, upon a knowledge of the anatomical character of the particular tumors treated, and above all upon attacking the disease before it is too far advanced."

Referring to the limitation of radium therapy as "numerous and formidable," Dr. Ewing pointed out that "the supply of this metal is small and generally restricted to a few institutions. The requisite skill to apply it safely and effectively and to choose suitable cases is still more restricted. Beginners often do more harm than good and it is easy to discredit the agent entirely. The methods are badly in need of standardization. Under-dosage may destroy superficial tumor cells only and leave the deeper ones to grow in the inflamed tissues. Over-dosage causes the destruction of normal or diseased tissues resulting in fistulas, hemorrhage, and severe infection. With repeated doses tumor cells appear to become less and normal tissue more susceptible. Excessive scarring often results and prolonged exposure to large amounts often causes a peculiar and severe form of general intoxication. Several workers have had fatal results from their attempts to cure advanced cases. Finally, radium has only a local effect extending at most to a depth of six to ten centimetres and if it has any constitutional influence this cannot be relied upon to deal with extensive local or generalized cancer. Under these circumstances a general recommendation to the public to resort to radium for all types and stages of cancer is decidedly inadvisable."

With reference to the future of radium, Dr. Ewing did not venture a forecast but pointed out that very great significance must be attached to its selective action on many kinds of tumor tissue. In spite of rapid improvement in the technique of application the speaker believed that on the whole the methods are still comparatively crude al-

though he had little doubt that exact dosage and accurate adjustment of the apparatus can be worked out to a much greater degree than is now accomplished. "For inoperable cases," Dr. Ewing said in conclusion, "the value of radium, although great, is perhaps over-estimated. To what extent it may establish itself in the treatment of operable cases it remains for the future to decide."

Dr. Joseph C. Bloodgood, of Johns Hopkins University, spoke from the surgeon's point of view on cancer in the human being, dwelling especially upon the importance of the pre-existing lesions which may develop into cancer and in the treatment and removal of which lies the chief opportunity of preventing this disease. Dr. Bloodgood made it clear that cancer in its early stages is easily cured. "The disease," he said, "usually springs from a pre-existing lesion allowed to go unattended. Chronic irritation of a sore may also contribute. In external cancer the warning is visible or can be felt. Unfortunately pain is rarely present. A mole or a wart, a small area covered with a scab, a small lump or nodule beneath the skin, an unhealed wound, all of these may indicate potential cancer. The appearance of these defects should mean a call upon the physician for examination as to the probability of incipient cancer. Nothing is lost by taking the precaution if symptoms are not found, and on the other hand, the risk is too great to allow the warnings to go unheeded. The question in this case is decided by the physician and in many cases a minor operation removes a probable cause of the disease."

"No man ever yet had a cancer on the lip or tongue without first experiencing some warning," continued the speaker. "The defect may be a burn from continued smoking or an irritation from ragged teeth. The probabilities of a cure are excellent when men heed such signals of possible danger and are treated at once. Tobacco users are more subject to cancer than those who do not use it. There is no means of preventing cancer of the breast, the appearance of a lump or a discharge from the nipple being the first sign, but when such lumps are at once removed on their discovery half will be found benign, that is, not cancerous. The removal of benign lumps undoubtedly prevents cancer in many cases since modern medicine clearly recognizes the danger of benign lumps turning into malignant disease of the breast. The chances of permanent recovery in true breast cancer vary with the exact type of the disease but are excellent if it is recognized early and completely removed. The chance of recovery grows less and less as the delay is more and more protracted until cancer is incurable from the extent of the local or general involvement. Cancer

of the stomach is a more difficult proposition but even in such cases there is usually a warning. Abnormal sensations of daily recurrence should not be neglected. So-called indigestion or what is styled 'colic' may be the warning. The chances are that it is not, but it may be so. If the pain, the sensations, the message from this part of the body comes time and time again, especially among people over thirty or forty years of age, a physician should surely be consulted."

"The mortality from cancer," concluded the speaker, "could be reduced considerably if the average person knew how to take care of himself. It is not a 'blood disease,' it is not a disease which people have any reason to be ashamed of. So far as physicians can tell it is not brought on by ill health or food. It comes to healthy persons, the healthy man or the healthy woman, but if the simple, easily noticed warnings be heeded the task becomes comparatively easy and the only miracle we have to perform is to educate a million people where we now educate one."

A historical survey of the crusade against cancer through the education of the public was given by Curtis E. Lakeman, Executive Secretary of the American Society for the Control of Cancer. He said that the first widely known campaign of this kind was initiated by Prof. Winter, of Koenigsberg, Prussia, in 1891. As a result the cancer death rate of that vicinity had been definitely lowered and a large increase in the number of women applying for treatment in the early and operable stages of the disease had been noticed.

In England the chief effort has been made at Portsmouth, under the auspices of the health department and at the instigation of Dr. Charles P. Childe, a prominent surgeon, whose book "The Control of A Scourge," published in 1906, is regarded as one of the best popular treatises on the means of recognizing and preventing cancer. The speaker reviewed the work of pioneer physicians in urging similar educational campaigns in the United States and referred to the appointment of cancer committees by the American Medical Association, the Clinical Congress of Surgeons, the Pennsylvania State Medical Society, and the action of various state and local boards of health. These local and independent movements have now been co-ordinated in the work of the American Society for the Control of Cancer which was founded in 1913 with the approval of all the leading professional organizations and with the active interest and support of many prominent physicians and lay people. "The results of the educational campaign," said Mr. Lakeman, "are already becoming clear in such statistics as those reported by the Johns Hopkins Hospital, the Barnard

Free Skin and Cancer Hospital of St. Louis, and similar institutions and clinics showing a very definite and universal increase in the number of patients applying for early treatment. At the Barnard Hospital, for instance, a recent study of the records gives a striking picture of progress in the treatment of one form of cancer among women. From 1905 to 1907 there were 19 cases with an operability of 11.1 per cent. From 1908 to 1910 inclusive, there were forty cases with an operability of 17.5 per cent. From 1911 to 1913 inclusive, there were forty cases with an operability of 17.5 per cent. From January, 1914, to December 1, 1916, there were sixty-six cases with an operability of 40.9 per cent."

Dr. Leo Loeb, of Washington University Medical School, one of the first workers to devote himself to cancer research in this country, and Prof. G. N. Calkins, of Columbia University, presented papers of great scientific interest on "Tissue Growth and Tumor Growth" and on "The Stimulating Effects of Protoplasmic Substances on Cell Division."

BOOK REVIEW.

The Nervo-Muscular Mechanism of The Eye; and, Routine Eye Work. By G. C. Savage, M. D., Nashville, Tenn. Published by the author. Price, \$1.00.

The author goes into the subject of the nervo-muscular mechanism of the eye in his usual clear and scholarly manner, bringing out many new points with reference to the various ocular rotations, supplemented with cuts of his muscle indicator, and charts showing the relationship of the various cortical centers to the eye muscles and their action.

The section on routine eye work is well written and very instructive. These two addresses are well worth the price to all interested in ophthalmology.

H. F. W.

Miscellaneous

THE SURGEON.

Because God made me wise in healing pain
And taught me how to straighten crooked limbs,
I went to offer, free, my services
Unto the poor and thus to honor Him.

The place I chose from out the misery
Of our great town was full of little ones,
Poor wee "Purifiers of the World"
To whom no childhood pleasure ever comes.

They crept in dozens, scores, up to my knee
Their poor pinched faces old beyond their years,
The little crippled bodies, helpless limbs
And hopeful faces filled my eyes with tears.

I wondered how I ever dared to say
That I a man of miracles could be!
I felt so utterly incapable
Before these little tots who trusted me!

And then the Voice came whispering in my ear.
I knew I had a covenant to keep.
The work was His, not mine. The message said,
"Take heart, my son, for thou shalt feed my sheep."

So clothed in strength I had not had before,
I tried to save these little lives from pain.
The Doctor from the shores of Gallilee
Stood by my side and worked His cures again.

—ANNA H. WOOD.

A REAL ETHICAL DRUGSTORE AT LAST.

At last we have something that the ethical physician has been waiting for for many years—a real ethical pharmacy, and not a miniature department store, or hodge-podge junk shop, in which sundries and patent medicines play the most prominent and the prescription department the least important role. It is a phenomenon worthy of notice.

This true pharmacy is located at 2,400 Broadway, corner of 88th Street, right in New York City, and its proprietors—the Ethical Drug Stores Corporation—tell us that their drug store does not sell drugs, patent medicines, home remedies, not even such as are official in the Pharmacopeia, except on physicians' prescriptions. Nor does it sell any soda, cigars, candies, toys, hair-soles, photographic supplies, toilet articles, tea, coffee, crackers or sandwiches. In short, it is a strictly professional pharmacy devoted to the exclusive work of putting up physicians' prescriptions.

Such a drug store is certainly an auspicious phenomenon in commercial New York, and we believe that there is a sufficient number of ethical physicians to support it with their patronage. We wish the Ethical Drugstore success.—Exchange.

DO YOU KNOW THAT

One million two hundred thousand Americans die each year, it is estimated?

Heart disease, pneumonia and tuberculosis cause more than 30 per cent. of deaths?

Sickness lowers earning capacity?

The U. S. Public Health Service is the nation's first line of defence against disease?

Disease is the nation's greatest burden?

Sunlight and sanitation, not silks and satins, make better babies?

Low wages favor high disease rates?

A female fly lays an average of 120 eggs at a time?

Dirty hands spread much disease?

A high bred dog has a right to have his birth registered—so has a baby?

The U. S. Public Health Service guards American ports to exclude foreign disease?

Health is a credit with the bank of nature?

A clean garbage can is a good example to the family?

Filth breeds flies—flies carry fever?

Slouchy postures menace health?

Health brings happiness—sickness, sorrow?

Florida is a specific for rheumatism and catarrhal troubles. I have seen a great many tourists from the north come here every year in the fall to get rid of their catarrhal condition and especially of rheumatism: I have never seen while here a case of rheumatism. I don't know whether all Florida will cure the above maladies, but this particular county—Pinellas—will do it. Malaria is rare, practically absent around here, although the much-heralded cause of the miasma is present in great numbers.—M. Friedlander, Medical World.

SLANDERING THE FORD.

A chiropodist received a call from a woman stopping at the hotel and on being shown her room, found her in a kimono. "Will you promise to trim my corns and keep your mouth shut?" asked the woman. He assured her he would, but began to protest when she started to remove her kimono. "Lady, lady," he implored, "you musn't do anything like that." "Listen to me," said the woman heatedly, "I've ridden all the way from Colorado in a Ford and I guess I know where my corns are better than you do."

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bath robes, sheets, towels, etc., may be borrowed without charge, from the
loan closet at each dispensary, on application to the nurse, by persons being
treated in their homes.

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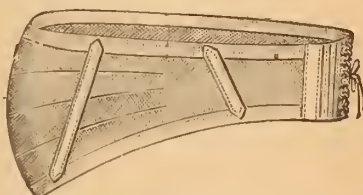
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By the Mulford method, with the process of glycerinization and strict bacteriologic control, pathogenic bacteria are excluded and a satisfactory product is secured.

The Mulford Tube-Point is the ideal container for vaccine. It combines a hermetically sealed capillary chamber, which protects the vaccine from all contamination, and a sterile scarifying point ready for use. The Mulford tube-point container is unexcelled as a safe way of furnishing vaccine virus.

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DR. J. W. BASTIAN

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Assistant Editors

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WHAT NEXT.—We noted recently the proposed "American Society of General Practitioners," and, judging from the purposes outlined by its sponsors, we could find no fault with it *per se*, although we intimated it would probably prove a superfluity.

Now, however, we must take cognizance of another society, because its purpose is openly declared to be the extension of what all ethical physicians abhor—namely, fee-splitting. This new monstrosity is styled the "Medical Society of the United States," and endeavors to ensnare regulars, homeopathics, electics and what-nots promiscuously. As outlined in their bulletin, the scheme seems worthy enough, thus:

"The Medical Society of the United States has been organized for the purpose of founding a great National Society which shall include all reputable members of the medical profession who have not (for one reason or another) affiliated themselves with the American Medical Association or its branches, as well as members of that great body who have become disgusted with its management under present control. Graduates of Homeopathic and Eclectic colleges are admitted upon the same terms as those of the so-called

"regular" schools. Its scheme of organization will be noted below."

"The objects of this association shall be the improvement of the status of the medical profession of the United States through meetings, publications, lectures, etc., the promotion of the Public Health by means of improving sanitation and instructing the people in matters of hygiene, eugenics and social economy; to secure uniform examination and registration in the various States of the Union, together with more practical methods of reciprocity between State Boards of Health, and to issue to its members Certificates of Membership which shall be of value in securing reciprocity, and to promote the interests of the medical profession of the United States in regulating, so far as possible by its influence, the conduct of medical schools, hospitals and journals, and to establish and maintain a Home for Aged Physicians to be supported by voluntary contributions from members of the association."

So far, so good, but if you send for an application blank, with it will come a letter something like this:

Dear Doctor:

Naturally, men are either conservative or progressive—there are always two parties in almost everything. The American Medical Association represents the conservatives; heretofore the progressives have had no great national organization.

We—the majority of the medical profession—who believe in division of fees (i. e., that the surgeon should not "hog" the whole of a patient's money and leave nothing for the family doctor,) are no longer welcome in the A. M. A. We are therefore organizing the Medical Society of the United States, which will not be conducted for the benefit of a few selfish egotists. We would like to have you with us.

It costs only \$1 to join us. This covers dues for 1916 and includes expense for the beautiful certificate of membership (suitable for framing), which you will receive on admission. Fill enclosed blank and return to me with \$1.

Cordially yours,

Emory Lanphear.

P. S.—Membership in your local society is NOT obligatory. On the line "Recommended by" put the names of two doctors (preferably of your neighborhood,) who will vouch for you.

You will get this sort of letter from St. Louis, where the arch conspirators seem to dwell in some degree of security. Among these latter are:

President, A. H. Ohmann-Dumesnil, St. Louis.

Secretary, George Howard Thompson, St. Louis.

Treasurer, Emory Lanphear, St. Louis.

Vice-presidents, Carl Keller, Honolulu; Nobel Younkin, Frankfort, Ind.; Oscar J. Fullerton, Waterloo, Iowa; William F. Waugh, Muskegon, Mich.; Bruno J. F. Getzlaff, Sutton, Neb.; *George L. Servos, Reno, Nev.; J. N. Pyle, Mineral Wells, Tex.; C. A. Bryce, Richmond, Va.; Josef Francois Replogle, Dubois, Wyo.

Among those on the program for their first annual meeting were W. A. Newman Dorland, Chicago; William S. Gottheil, New York City, and many others, including Evan O'Neill Kane, of Kane, Pa. This last named physician is exonerated in view of the following correspondence:

MEDICAL SOCIETY OF THE UNITED STATES

Office of the Treasurer,
3447 Pine Street, St. Louis, Mo.

June 14, 1916.

Dr. Evan O'Neill Kane, Kane, Pa.

My Dear Doctor: I would very much like to have your name on the program of our society which will meet in this city the first week of October. If you can and will prepare a paper for that meeting, send me the title at once for the preliminary program. If you find, later, that you cannot attend, the secretary can read it for you. The main thing is to have the contribution to the program. Also we want you to become a member; application blank enclosed. Hoping for an immediate and favorable reply, I am,

Cordially yours,

(Signed) Emory Lanphear.

Kane, Pa., June 21, 1916.

Emory Lanphear, M. D., Medical Society of the United States, St. Louis, Mo.

Dear Sir: I am enclosing herewith application blank for membership in the society, and also submit title of my paper which you kindly requested. Let us call it "The Possibilities and Limitations of Radium." I think this will be a fairly interesting topic to your members, as radium is coming considerably to the front, and has passed well out of the hands of quacks. The writer has gone heavily into radium recently, and has sufficiently passed through the glamor of its enchantment, and entered deeply enough into the trials and tribulations connected with it to be able to speak with feeling and some knowledge on the subject.

Very truly yours,

(Signed) Evan O'Neill Kane.

Sept. 16, 1916.

Emory Lanphear, St. Louis, Mo.

Dear Sir: I have just learned from an editorial in the September number of the Missouri State Medical Association's Journal that the "Medical Society of the United States," into which organization you solicited my membership, for a principal object, organized fee-splitting. I am radically opposed to this contemptible practice, which I emphatically condemn in any and all the methods by which it is conducted. I am a fellow of the American College of Surgeons, which is making every effort to stamp out this corrupt custom, and am pledged to do my part in the good work.

I demand the immediate withdrawal of my name from membership in your society, and its removal from the program of your coming meeting.

Yours truly,

(Signed) Evan O'Neill Kane.

It is our opinion the other gentlemen will have some tall explaining to do before their county and state societies soon. This nefarious business is being promoted in states that have specific laws against fee-splitting, rebates, etc., and is in direct contravention to the code of ethics of the A. M. A., and of the oath of the American College of Surgeons, which latter has expelled three fellows within the past year for violations of their obligation in this very matter. All the ethical men are unalterably opposed to it, and so are the enlightened among the laity. We wish every physician would read the article in the September *Metropolitan*, by Burton J. Hendrick, entitled *The Purchase and Sale of Sick People*. It's an eye-opener, and shows just how this thing looks to the layman.

We mention this "Society" to warn our men in Delaware not to be caught in this trap. It will be a short-lived affair, for obvious reasons.

Observations on Recent Work At the American Ambulance, Paris, France

By RICHARD R. SPAHR, M. D., Wilmington.

The writer was a resident surgeon at the American Ambulance, from April 1st to August 1st, 1916, on the service of

Dr. James H. Hutchinson, of Philadelphia, who is in charge of the Pennsylvania Unit. Under this service, as now arranged, the different types of cases have been grouped, by wards and floors, to some extent, i. e., the "eye," "jaw" and other "head" injuries are, in most part, grouped in their distinct wards, thus facilitating the work of the ophthalmologist, dentist, and surgeon. The medical complications, comparatively few in number and not of a critical nature generally, do not require isolation. Contagious diseases, as scarlet fever and diphtheria have occurred, though chiefly among the ambulance drivers. These patients are isolated at once and then evacuated to a contagious hospital (as Pasteur Institute) in Paris.

GENERAL: The general routine treatment for compound fractures (all infected), large or small flesh wounds, and of the "head and jaw" cases consists now of the principles laid down by Dr. Carrel, as regards the early cleaning and the thorough and constant drainage of flesh wounds, and the types of apparatus used for the fractured limbs, as begun by Dr. Blake. For fractures of the arms, however, the "overhead" structures, used for these lesions, etc., have been replaced by the "aero-plane" splints, devised and modified by Dr. Levya and Dr. Buckner, of the du Bouchet service and Miss Gassette, who is in charge of the bandage and splint supply rooms. Uusing for the wounds of the upper extremity the metal splints incorporated into the plaster belts which, upon hardening after application, are cut, padded and strapped (with bucvkles) before being used by the patient. These are so made not only to allow adequate facilities for the best possible result. By these "aero-plane" splints therefore, these patients are made ambulatory practically from the beginning. For the wounds of the lower extremities Blake, Hodgekin splints are used with cradles (if required for those fractures below the knee). Proper extension and abduction of those of the thigh, with adequate foot support, are obtained by means of the usual mechanical ropes, pulleys, weight bags. But in the majority of the cases on this service, the aero-plane splints are used (upon receipt of the X-Ray report,) for the upper extremity, and the overhead apparatus, with the desired splints and position obtained, best adapted for the dressing and healing of that wound, for the lower extremities. Plaster casts are not being used extensively except as the "gutter" cast, into which the limb is placed after union has been obtained and the overhead removed, and just before the patient is evacuated to an auxiliary hospital. Those casts already on, upon admission, are generally removed at once to prevent oedema, decubitus or spreading of the infection. But in some instances, as where

an arthectomy of the knee joint has already been performed or a simple fracture of the tibia exists, with practically no shortening or deformity, the cast is allowed to remain on for a time at least. It is to be noted in passing, that in almost all instances, the splints and dressings applied at the front or First Base Hospital are most adequate for transportation. Of course the wounds not being dressed frequently enough give the hospital corps plenty to do upon the admission of the patient. All types of wire and aluminum splints are used for transport for the extremities with proper dressings and bandages for them and the trunk wounds, as well as all forms of plaster casts. In the hospital in the proper method of extension of many of the compound fractures, i. e. of the lower extremity chiefly, it has been found that, contrary to earlier teachings, the (Buck's) extension strap (canton flannel with mucilage or adhesive) can, with advantage, be placed some distance above the lower end of the upper fragment, if the wound in question will allow its attachment to the skin of the leg or thigh. Thus a better "purchase" is secured and with proper alignment by splint and weights, more rapid union obtained.

GAS INFECTION: In reference to the frequency of gas infection (*Bacillus aerogenes capsulatus*) and its mortality, we had a small percentage of fatalities in spite of the delay, in some cases, between the time the wound was inflicted and that of the patient's arrival at the Ambulance. This we believe due to a general lower virulence of the organism, the soldier's increased resistance to, or partial acquired immunity from the organism and to the prompt and efficient treatment administered. This latter consists of free incision immediately upon the diagnosis of the possibility of gas infection or a general cellulitis, with drainage and irrigation, using Dakin's solution (Aqueous Solution 0.5 per cent concentration of Sodium Hypochlorite) or Neutral Salt Solution generally. Flax-seed poultices early and potassium permanganate later, have also been used. For continuous irrigation, either in such cases or for those of pyogenic infection alone, with or without fracture, the reservoir and tubing apparatus suggested by Dr. Edmund Piper and modified by Dr. Keating of the University service was used in most instances, the flow being regulated as a "Murphy" drip. For this continuous irrigation, normal salt solution was the more frequently used and for the cases of dressings and irrigation at second or third hour intervals Dakin's Solution.

CARREL TREATMENT: As outlined by Dr. Alexis Carrel and carried out in more or less modified forms at the American Ambulance consists in the early and prompt cleaning of the wounds of fleshy parts or compound fractures immedi-

ately upon admission and under a general anesthetic using normal salt solution to irrigate with an iodine solution to cleanse all recesses with curettement performed. Then and there (fairly large) drainage tubes are placed as required and upon the ward small-calibre (fenestrated) tubes, as many as are deemed necessary are placed to the bottom of all pockets. Through all these tubes, continuous or intermittent irrigation with *Dakin's* or normal salt solution is carried out for the first thirty-six to seventy-two hours or longer till the wound is quite clean and the discharge under control. The paraphernalia is then reduced as indicated, meanwhile the limb being in the best possible position for the fractured bone or bones, if such exists. The mechanical action of the fluid in the continuous or frequent irrigations is the larger factor in the rapid cleansing of these highly infected wounds and not the kind of solution used.

AMPUTATIONS continue to be, as in the past, few in number at the American Ambulance. Every effort in position, apparatus and dressing is made to save the limb regardless of the extent of bone or flesh involvement, as far as is at all reasonable. The result, on the whole, have warranted this procedure, though in some instances the likelihood of causing, over weeks of earnest effort and waiting, amyloid (and other) degenerations in muscles and digestive organs, with a general greatly weakened vitality and lowered resistance and tone, is quite open to criticism. This whole question demands therefore, a nice point in being able to definitely decide *the* time to cease palliative methods and amputate. This operation, as is usually the case, must be rapidly performed, securing as good flaps as possible, but the stump wound being left wide open for drainage and dressings with extension applied later to the flaps if required, when the time comes for closing over the stump. Supportive and stimulative treatment also is generally necessary for several days afterward and hemorrhage guarded against.

HEMORRHAGE is the most frequent *emergency* we have for immediate and effectual treatment. Those, arterial or venous, from limbs can the better be temporarily controlled by tourniquet till the patient can be prepared and anesthetized, provided a possible stump is not too short. But in those cases of the facial or internal maxillary arteries, etc., in fractures of the upper jaw, or in the region of the buttocks or back, prompt hemastaxis with sufficient pressure is usually adequate. The clamps are allowed to remain on till they slough off, generally within four days. In those cases of hemorrhage through the fractured hard palate or upper jaw, the external carotid, on side of hemorrhage has been effectively ligated. Wounds of the scalp, with or without

fracture of the skull, though many of these latter have already been trephined upon arrival, have given little trouble nor have they been long in healing, with the usual methods used in the majority of the cases. But in a couple of instances, cellulitis of the scalp, extending to the bony cranium and so to the middle ear, mastoid or meninges resulting fatally, have occurred. In the treatment of the patients with fractured jaws and marked loss of substance the surgeons, co-operating with the dental-surgeons, have won an enviable record. This has been widely acknowledged almost from the beginning and much more need not be said at this time. Officers and men from England and Servia, as well as from France and all her dependencies have been sent to the American Ambulance in many instances as the hospital representing the most advanced work and satisfactory result. The successive stages of operative treatment with methods of keeping the mouth and wound surfaces clean, and of feeding, etc., have been outlined in earlier papers. The writer did not have personal charge of any of the so-called "jaw" cases.

MEDICAL CONDITIONS do not constitute a large percentage of our cases (as already noted) even in complications. Diphtheria and follicular tonsillitis have rarely occurred, both among the patient and ambulance drivers. Scarlet fever has also occurred in one or two instances among the latter. These patients are immediately isolated and then transferred to the Pasteur Institute, Paris. Dysentery, developing in the trenches, is at times quite marked in some patients upon admission, but under the usual routine these patients recover from that condition. Gastritis rarely occurred from either toxemia or other cause, i. e. where an anesthetic had been administered two to four times within a week. With frequent gastric lavage and proper diet, this condition was relieved. Acute articular rheumatism or rheumatoid conditions were, in the American Ambulance, uncommon. Mental conditions as depressive type of maniac-depressive insanity or the early stages of dementia praecox were rare. By this period of the war, persons having any such tendencies have been largely eliminated.

DERMATITIS: As a complication has also been rather uncommon. As the expression of an intestinal toxemia, it has occurred (maculo-popular) and also as a chronic vesiculo pustular eczema or eczema rubrum has been present in a few cases of (old) highly infected compound fractures, now healed, but with a sinus or two still active. This type is most persistent and difficult of obtaining lasting improvement or cure, in spite of almost any rational treatment.

THE X-RAY DEPARTMENT is doing very satisfactory ser-

vice under discouraging circumstances at times, i. e. the great rush of patients some days for the facilities at hand and the fact that at present all patients must be carried up and down one to three flights to the X-Ray Rooms, thus failing to secure a correct plate of fragments after setting (without moving the patient again), as pictures are taken as soon upon arrival as possible and before treatment has been instituted. This objection will be largely eliminated when the pictures can be taken on the wards with the limbs in the desired position. Along with this routine work "localization" (by plates) of shrapnel is also done, by which means, aided by the electric vibrator and "Marie's localizer" bullets and shrapnel are located and removed by operation.

THE LABORATORY: Smears and cultures from practically all wounds are sent in upon admission and often too at the first exploratory (or "cleaning") operation in order to determine the presence or absence of the *Bacillus aerogenes capsulatus*. The more routine work of blood counts, blood smears and cultures, etc., is performed as indicated. Routine urinalyses are done on all patients. Vaccines are also made for skin affections, pyorrhea and joint involvements and sub-acute septicaemias, etc.

THE MESSAGE DEPARTMENT has grown rapidly and has been of the greatest service. Its head and corps have been most willing and efficient workers whose efforts have been appreciated by all. Early but moderate massage, later active and passive movement, with use of the electric battery, etc., has been the slogan with often gratifying results. On account of the necessary length of time consumed for the ultimate result of the average (partial) paralysis case, in arm or leg, to be obtained, a few of us, spending from three to six months in France are able to see the effects of time, practical massage and electricity applied and the later active motion, etc.

THE EYE DEPARTMENT was another quite active part of the institution, furnishing very satisfactory results in the operative technique and ward treatment of those partially or wholly blind. All forms of infection and inflammation of the eye-ball and lids and the opportunity for facial plastic work, etc., are met with.

THE AUXILIARY OR SUPPLY ROOMS: Supervised and operated by volunteer auxiliaries, chiefly under the leadership of Miss Gassette of Chicago, is the department at present in need of greatest assistance from those here at home who are so interested. Here, with the carpenters and mechanics, the overhead splints and other apparati are made and stocked, all the gauze and muslin bandages and dressings furnished, and almost every supplementary article ob-

tained. Curtailment of gauze dressings, etc., has lately been necessary as not only was it impossible to obtain the gauze in Paris, but it was not coming from America. It is hoped that funds to retrieve these conditions, as well as to improve the X-Rays equipment and other worthy departments will soon be forthcoming.

THE NEUROLOGICAL WORKS: The neurologists by their careful examinations and accurate diagnoses, with oversight of the proper treatment carried out have been of immense assistance to the surgeon, both in the operating room and on the ward.

SURGICAL APPLIANCES as Steinman pins, Parrum bands and Lane plates, etc., have in spite of the majority of the patients having large and infected wounds associated with the compound fractures, on the whole, proved beneficial. In about a third of the cases however, subsequent infection at their site, failure of union and with the patient's general condition becoming gradually worse have necessitated their removal and in some instances, amputation.

Following is a description of the formula of Dakin's Solution: Dissolve in large bottle, 140 grms. dry carbonate of soda with 10 L. of sterile water. Add to this 200 grms. of chloride of lime (bleaching powder), shake well. In one-half hour siphon off clear fluid into another bottle through a cotton plug or filter paper and then add 40 grms boric acid to the clear filtrate. This solution is neutral to litmus, is non-irritating and is the proper strength for wet dressings and irrigations. (Extract from "Report on the Medico-Military Aspects of the European War," pg. 52, by Surg. A. M. Fauntleroy, U. S. N.).

IN THE OPERATIVE FIELD all credit is due to Dr. James H. Hutchinson of Philadelphia for his efficient work on nerve and bone injuries, aside from his arduous executive duties. The nature of the cases here encountered make this work for each individual man largely experimental, at least in his beginning or shortly after the outbreak of the present war. The end results, too, are difficult at times to prognosticate and the problems of method and extent of (useful) procedure, difficult to determine. With patients presenting wounds of all degrees of tissue and bone destruction, highly infected and consequently poorly nourished, with the primary treatment finished, the question of the possibilities for nerve or bone reunion or repair, with some degree of function secured, presents problems requiring keen judgment and operative skill, developed in the hard school of experience with problems and results at times most discouraging and at others brilliant in possibilities and accomplishments.

In closing, we wish hereby to express our thanks to Dr.

A. E. Billings of Philadelphia, recent Chief Resident Surgeon of the American Ambulance (Pennsylvania Unit) for his criticism of this paper.

TO THE DOCTORS.

Doctors, dear doctors, I'm reading your book
About your convention, and hard as I look
I can't find a word about ailments of mine,
Though I read about phenolsulphonephthalein.
I've twinges of pain in my back, yet I am
Sure you don't care one roentgenocardiogram.
And why should I seek your expert information?
You're busy, I see with lichenification.
My case is so common I know you'd object to me.
Why, I've nothing absorbing as astragalectomy.
To contract some disease to amuse you I'll try, as this
Chondrodysplasia or trypanosomiasis.
Had I slight xanthelasma or hypertonicity,
I know you would give me both care and publicity.
Had I sphygmocardiographic motility,
Your justly famed osteoclasts ability
Would bring my maxillary ridge back to form
By pityriasis ichthyosiforme.
With clashing of symblepharons you would greet me;
You'd send xanthochromiasis cheering to meet me.
You'd lead me through labyrinthitis most carefully;
You'd probe my melanosarcomata prayerfully.
My erythrodermia you would explore for me,
My heterophoria you would deplore for me.
I know that with feelings of pleasure ecstatic
You'd erase every trace of my telangiectatic.
From reading your book, I am sure you'd tend to me
If some queer disease you'd be willing to lend to me.
You've of polysyllables, dear doctors, no lack,
While I'm only a man with a crick in his back.

—A. L. Weeks, Detroit News.

MODERN HIGH-GIENE.

The following item appeared in the *Baltimore Sun*:
"Benjamin E. Davis will be hanged shortly after daybreak
this morning. . . . Dr. W. L. Smith, jail physician, visited
him and said his condition had improved and that he could
see no reason why he should not be hanged, from a stand-
point of health." Thus do we see the importance of modern
hygiene, for it has been demonstrated by laboratory tests
that if a man is hanged when in poor health, the results are
liable to be serious.

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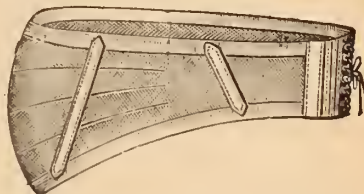
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Editor

DR. W. EDWIN BIRD

907 Delaware Ave.

Wilmington, Del.

Business Manager

DR. J. W. BASTIAN

915 Washington Street

Wilmington, Del.

Assistant Editors

DR. G. I. MCKELWAY

Dover, Del.

DR. T. H. DAVIES,

Farnhurst, Del.

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DELAWARE MEDICINE AND THE WAR.—Physicians and surgeons of this State, who desire to serve their country actively in the military establishment, can do so in any one of four ways: (1) join the regular army or navy; (2) join the Officers' Reserve Corps, of the Army or Navy; (3) join the State Militia or Naval Brigade; (4) join some one of the eleven Red Cross units organized for service with the Army or Navy. These are: (1) ambulance companies; (2) base hospitals; (3) hospital units; (4) surgical sections; (5) emergency nurse detachments; (6) sanitary training detachments; (7) information sections; (8) refreshment units and detachments; (9) supply depots; (10) general hospitals; (11) convalescent homes. Of these, the medical fraternity will be interested chiefly in Nos. 2, 3, 4 and 10.

We recently learned that several of our Wilmington doctors were willing to serve in a locally organized base hospital. Knowing that the way other base hospitals had been started invariably had been by invitation of the Red Cross, I addressed the following letter to the official in charge:

Wilmington, Del., April 16, 1917.

Col. Jefferson R. Kean,

Dir.-Gen. of Military Relief,

American Red Cross, Washington, D. C.

Dear Sir: Kindly forward me complete information as to the formation of a base hospital unit of 500 beds. Some of the medical profession here have shown sympathy with the suggestion that a Wilmington unit be formed, and I believe the necessary money, equipment and men would be forthcoming if a concerted movement in that direction were made. Certain it is, that I am willing to do all I can to further the project, should you decide that it is desirable. It has struck several of us that it would be particularly appropriate for the home of the largest powder interests in the country to be represented in this war by some distinctively local organization, though no officials of the duPont Company have been interviewed as yet concerning this matter.

Should this matter seem worthy of serious consideration, kindly advise us how to proceed.

Yours very truly,

W. Edwin Bird.

The reply of Colonel Kean is as follows:

Washington, D. C., April 17, 1917.

Dr. W. Edwin Bird, Wilmington, Delaware.

Dear Sir: In response to your letter of April 16th, I beg to advise you that the full quota of base hospitals has been reached and we have been advised by the Surgeon-General's office not to increase the number.

For your information I am sending to you under separate cover, circular letter and pamphlets relating to the various units organized by the American Red Cross, but it is earnestly requested that you do not proceed with the organization of any of the above until you are given specific authority to do so from this office.

Thanking you for your interest,

Yours very truly,

J. R. Kean,

Colonel, Medical Corps, U. S. Army, Director-General of Military Relief.

It thus appears that Delaware physicians no longer have a chance to organize any new Red Cross work, Col. Kean's letter making it clear that the field is already satisfactorily covered. However, as noted above, there still remain the first three branches in which our men can serve. We have no doubt that if Delaware is called upon to offer a specific number of medical men for these three, she will not be found wanting.

The circular letter referred to by Col. Kean is as follows:

RED CROSS MILITARY UNITS.

Red Cross Military Units which the Red Cross is authorized by the War Department to create for service with the Medical Department of the Army in war are base hospitals, hospital units, surgical sections, and general hospitals.

In any consideration of the matter of Red Cross hospitals the distinction should be borne in mind between the various classes of hospitals which take part in the service, of the rescue and care of sick and wounded of armies. It is divided into three zones—the first zone being called the service of the front, and extending from the line of battle back to the field and evacuation hospitals. This zone is operated by the Medical Service of the Army and Red Cross organizations do not usually take part in it. The second zone, is that of the military base to which the wounded are brought from the first zone, and where they first meet, at the base hospital, the comforts and facilities of a real hospital which has good beds, trained women nurses and a large professional staff. The third zone is that of the home country and the hospitals organized, whether established by the Army or Navy from existing civil hospitals, are called general hospitals. In much of the correspondence with this office it is found that when people speak of a base hospital, they really mean a general hospital, and that when they propose to establish a base hospital, they usually mean a general hospital in their home city.

A base hospital when called into service, is moved to the place where the military authorities need it. It is, however, organized in connection with a large civil hospital which is usually referred to as the "mother" hospital. This is required in order that the unit may be composed of doctors and nurses who are accustomed to work together and have already the spirit of unity and organization. If on the contrary it were permitted to enroll a base hospital from doctors and nurses, attached to various institutions, or in private practice, it would be without cohesion and a unit only in name, and would be in fact, only a list of names of little immediate value. The creation of these large and complex organizations is a military matter and also a professional one, and is therefore, never delegated to chapters, but is done in a definite way which has the approval of the War and Navy Departments. The first requirement for the organization of a base hospital, is a parent institution either a large civil hospital or a medical school, which can furnish the large professional staff needed for it, and still have left a sufficient staff to carry on the work of the parent insti-

tution. The second requirement is to find the member of this staff, who by his age, professional and personal standing, is a leader who can successfully organize the base hospital, if appointed its director for that purpose. The third requirement is to raise the funds necessary for the equipment. This is usually done through the local Red Cross Chapter, which must be strong enough to raise \$25,000 for this purpose, and also to furnish, through its committees of women, the hospital linen, hospital garments and surgical dressings necessary for the equipment of the base hospital. The money has in some cases, however, been raised by wealthy friends of the parent institution.

Hospital Units are organized groups of physicians, surgeons and nurses, with a number of orderlies which may be assigned to duty to supplement the established military hospitals. They may also be assigned to duty on hospital trains and ships. As they are joined to already existing organizations they will not be equipped with beds and hospital furniture, except for the personal use of the staff. They should, however, have a full operating room equipment for the surgical section and such instruments and appliances as may be desired by the medical section.

Surgical Sections are special detachments intended to reinforce the operating staffs in time of emergency. The surgical section has the same equipment as the surgical service of a hospital unit. The staff consists of four surgeons, seven nurses, two orderlies and a clerk.

The Base Hospital, Hospital Unit and Surgical Section are all movable units which should be prepared to serve wherever their services may be needed by the Government. Only in the case of very large hospitals having a strong chapter to back them, should the organization of a base hospital be attempted. Hospitals of lesser size desiring to offer their services for a movable unit should undertake one of the two latter.

General Hospitals. Civil hospitals in the third zone, the home country, when taken over for use by the military authority are called general hospitals. Service with the general hospital does not, therefore, necessitate leaving home. The organization of general hospitals is described in paragraph 20, of the Regulations for the Employment of the American Red Cross in War. Another way in which civil hospitals may be used is for them to give up a certain number of their beds for the sick and wounded soldiers and sailors, the administration of the hospital remaining in the hands of its own trustees and staff.

Sanitary training detachments are units for the instruction of men in first aid, the transportation of the wounded

and other matters, knowledge of which is required for service with the sanitary department of the army. The sanitary training detachment differs from the units above mentioned in that it is a chapter activity and is administered by the chapter which should buy its equipment. Every Red Cross Chapter should support at least one of these detachments.

J. R. Kean.

Colonel Medical Corps, U. S. A.
Director General of Military Relief.

ETHYL CHLORIDE ANESTHESIA

By J. S. KEYSER, M. D., Wilmington.

Ethyl chloride anesthesia has never been particularly popular. While it has come into use as an anesthetic in recent years, it has been known for over two hundred years. Glauber, in 1648, in some of his writings mentions it. It was first used as an anesthetic by Flourens in 1847. Two years later Heyfelder administered ethyl chloride vapors to produce surgical anesthesia. Alarming symptoms often occurred during its administration, these symptoms being in a large measure due to improper methods of administration, and also to impurities. Because of these symptoms its use was abandoned until about 1895. Due to better understanding of anesthesia and anesthetics in general, and to improved methods of administration ethyl chloride was again used and has rapidly gained favor with the profession.

Chemically, ethyl chloride is ethyl alcohol in which the OH has been replaced by chlorine. It must be of highest purity for use as an anesthetic. The tests for it are fully described in U. S. P.

The physiologic action of ethyl chloride is similar to that of chloroform. It has a paralytic and depressing effect upon the heart muscle, causes dilatation of the small vessels, and so causes a fall in blood pressure. Compared, however, with chloroform it requires from ten to twenty times the quantity of ethyl chloride to produce the same effect. In anesthesia of short duration this fall of blood pressure is usually not noted, and some men report a slight rise in blood pressure. The effect upon the respiratory function is indirectly the result upon the heart, for with the fall of the pressure the respiration becomes stertorous or arrested, and

finally entire cessation of respiration ensues. Due to the fact that ethyl chloride is not very soluble in the lipoids of the nervous system, there is usually not enough to paralyze centers, excepting that of pain sensation, and for that reason we do not have the abolition of reflexes. In fact muscular rigidity sometimes reaches a state of opisthotonos. Rigidity of the masseter muscles is almost always present, so much so that it may sometimes cause embarrassment..

As I have stated before, ethyl chloride is not very soluble in the nervous system. It is still less so in the blood serum, so that a very small amount is taken up, which forms a loose combination. A small amount is also taken up by the corpuscles. Because of this very loose solution in the blood, ethyl chloride is given off very rapidly, and patients wake very promptly unless highly concentrated vapors are used.

Further, because of this loose solution in the blood, and very rapid elimination, ethyl chloride has very little, if any, effect upon the kidneys and glandular secretions, and for this reason retching, nausea and vomiting are as a rule absent. In this it differs very markedly from ether or choloform.

Death under ethyl chloride anesthesia may be due to two causes. (1) Simple overdose of toxemia; and (2) intercurrent respiratory embarrassment. Symptoms prominent in ethyl chloride toxemia are pallor, pulslessness, muscular flaccidity, wide dilatation of the pupils, and arrest of breathing. In death due to intercurrent respiratory embarrassment, prominent features are spasm about the jaws, mouth, larynx, or respiratory muscles; respiratory arrest; and cyanosis.

The stages of ethyl chloride anesthesia are a little different from the other inhalation anesthetics. The first stage, which lasts about one-half to one minute, is that of analgesia, and commences after a few breaths of the anesthetic have been taken, and if a very short anesthetic is required, such as opening an abscess, this stage is sufficient. The second stage usually lasts two to four minutes, and after removing the mask from the face. This is a partial anesthetic stage. It is always wise to put a mouth gag in the mouth before starting the anesthetic, particularly so if oral operation is to be performed, otherwise some trouble may be occasioned in attempting to open the mouth during this stage of anesthesia, owing to the spasm of the masseter muscles which usually occurs. The third stage may last one-half to one minute, and is again a stage of analgesia. The patient may roll or cry or move, but no pain sensation is present.

The fourth stage is like that in other anesthetics. When continued too long a time, or an overdose is given, the bulb is effected, which is followed by respiratory arrest, cardiac

arrest and death. In some cases the first stage may be divided into an analgesic stage, which is followed by a stage of excitement, which is more common in very nervous or excitable individuals.

The signs of complete anesthesia under ethyl chloride are (1) quick, deep and regular breathing, (2) the eyeballs are fixed or rolling, (3) face is usually slightly flushed, (4) muscular relaxation or rigidity, (5) absence of corneal reflex. Cyanosis is a signal for more air and removal of mask. Stertor also is a signal for more air. Spasm of jaw and some respiratory embarrassment is common in muscular subjects. In many cases anesthesia is deepened after the removal of the anesthetic, owing to the absorption of the vapors from the lower air passages.

The patient begins, as a rule, to swallow a little time before consciousness returns. The first sense to return is hearing and the sight.

As I have stated before ethyl chloride is eliminated chiefly from the lungs. It very seldom causes any irritation to the kidneys, excepting in prolonged anesthesia. Albuminuria is rare.

The after effects of ethyl chloride will vary, depending upon the condition of the patient, the method employed and the length of the anesthesia. Some authors claim that vomiting is most constant and occurs in 20 per cent of the cases, but lasts only about fifteen minutes. In our own experience, however, we have found vomiting rare, and usually when it does occur the patient vomits immediately upon regaining consciousness, and only for a minute or two. Hysterical symptoms may appear in young girls. Erotic thoughts and dreams may occur with ethyl chloride as with nitrous oxide.

When compared with other anesthetic agents its rapidity of action is more like nitrous oxide, but cannot be compared with it in safety, excepting for very short anesthetics. The advantages of ethyl chloride are the rapidity with which it produces narcosis, the absence of after-effects when properly employed, and the rapid return to consciousness of the patient. Its relative safety depends upon the length of anesthesia.

In the last three years we have administered ethyl chloride to about 500 cases. We usually employ the open method, bringing the patient to the second stage or stage of true anesthesia, and then discontinuing it. Most of our patients were children ranging from two to sixteen years of age. In not a few instances we have employed it for adults as well. In most of the cases only short anesthesia was required, three to six minutes, but in some instances we have continued the anesthetic for ten or fifteen minutes. We have

not had any fatalities. After effects are very rare in our experience, and in some of the cases we have administered it in spite of the presence of acute and subacute bronchitis without any untoward effect, in which instance it differs markedly from ether.

I think ethyl chloride is very well adapted and comparatively safe for short operations, such as the removal of tonsils and adenoids, opening of abscesses, extraction of teeth, gynecologic examinations and such other short-timed operations where an anesthetic is desired or necessary.

THE KAISER'S PRAYER.

(The Latest Ultimatum.)

Gott, dear Gott, attentions please; your pardner Vilhelm's
here,
Und has a word or two to say indo your brivate ear,
So durn away all odders now and listen vell to me,
For vat I say concerns me mooch, Meinself und Shermany.

You know, dear Gott, I vas you freindt, und from mein hour
of birth,
I kindly let you rule the heaven, vile I ruled ov'er the earth;
Und ven I told mein soldiers of by-gone battle days,
I glady split the glory and gave you half the braise.

In every vay I tried to prove, mein heart to you vas true,
Und only claimed mein honest share in great deeds vat ve do,
You could not have a better freindt in sky or land or sea,
Den Kaiser Vilhelm Number Two, de Lord of Shermany.

So vat I say, dear Gott, is dis, dat ve shall still be freindts,
Und you shall help me send mein foes to meet their bitter
ents,
If you, dear Gott, vill this me do, I'll noddings ask again,
Und you und I vill pardners be, forevermore. Amen.

But listen, Gott, it must be kvick, your help to me to sent,
Or else I hav to stop attack, und only blay defent;
So four und twenty hours I giff, to make the Allies run,
Und put me safe indo mein blace, the middle of de sun.

If you do this, I'll do mein part, I'll tell the vorlts the fact,
But if you don't, den I must tink, it is a hostile act,
Den var at once, I will declare. und in mein anger rise,
Und send mein Zeppelin ships to vage a fight up in de skies.

Dis ultimatum now, dear Gott, is von of many more,
Mein mind is settled up to clean the whole vorlt off de floor,
Because you vas mein pardner, Gott, an extra chance is
giffen,

So help me vonce or else, I'll be ——de Emperor of Hiffen.

—Exchange.

RED CROSS EMERGENCY HOSPITAL

At a recent executive committee meeting of the Delaware Chapter of the Red Cross, at the Hotel duPont, the Military Relief Committee, Mrs. Willard Hall Porter, chairman, reported that the emergency unit will soon be in readiness. This unit is prepared in case of a disaster such as happened at Eddystone. It includes every necessary equipment for 100 beds. The equipment and beds will be stored by the Delaware Hospital until needed. All the bandages, etc., will be sterilized and packed ready for instant use. In case of disaster, the hundred beds can be installed in the old Court House, which has been offered for the purpose. The emergency hospital can thus be created in an hour or so. All the material is packed ready for transportation to the Court House.

The committee has also taken up with Delaware College the formation of an ambulance corps, to be used in conjunction with such an emergency hospital.

It was reported by the Military Relief Committee that \$5,000 so far has been expended, and that it will be necessary to raise more funds.

Mrs. Henry B. Thompson suggested the possible use of ten hospital beds and a portable hospital or tent for segregation of infantile paralysis, if an epidemic should break out again in Wilmington. It is the duty of the Red Cross under its charter to give help in case of pestilence, and this plan will be further discussed.

It was decided that only those committees of the Defense League working in conjunction with the Red Cross with the same chairman shall have headquarters in the City Hall. This is necessary on account of the limited space.

Mrs. Joseph P. Wales was chosen as publicity agent for this committee, and it was decided that all publicity shall pass through her hands.

A gift of \$200 was reported for State-wide work. This has already been used for materials to be sent to Laurel, Dover, Wyoming, Seaford, Delaware City and other towns, where branches have recently been formed.

KENT COUNTY MEDICAL NEWS

After a period of semi, and later, absolute stagnation, the Kent County Medical Society has awakened from its two years' sleep. Strychnine, nitroglycerin nor even pituitin had no part in the revival of our local society. The wide-awake doctors of Kent county suddenly got tired of being asleep (pardon Irish pun) so we woke up altogether, to get rested, as it were.

I believe that at the present time the Kent County Society is more active than any other medical organization in the State. We are having interesting and educating meetings, we are taking an active interest in legislation, we are doing our part along all the lines of medical progress. Under the leadership of Dr. L. A. H. Bishop, ex-president of the Delaware State Society, who is now president of our County Society, aided by Dr. T. G. Riley of Harrington as vice-president, and myself as a humble "order taker," and with the good will and co-operation of our brother members, we hope to maintain a standard high above the average of local medical bodies.

By the efforts of several persons in Dover, backed by the Kent County Medical Society, the various churches and the local lodges, a bill to incorporate a State or County Hospital was presented to the Legislature. The bill reads, that, when the people of Dover and Kent county raise \$25,000 the State shall give an equal amount (\$25,000) to establish a hospital at Dover.

Many persons are named as trustees, but it is understood that the Kent County Medical Society shall act as a "board of managers."

It is admitted that if a suitable hospital can be located in Dover, or the center of the State, many of the indigent cases that are now sent to Wilmington from rural New Castle, Kent and Sussex counties will be taken care of at the proposed hospital.

An excellent site has already been selected and a citizen of Dover has promised a modern automobile ambulance. Such a hospital should prove a great benefit to Wilmington hospitals.

Arrangements will be made with Wilmington and Philadelphia surgeons and physicians to become "associates" of the Dover Hospital, and one rule will be that *any physician* can treat his own patient in the hospital. The need of such an institution has been known for years. Dr. J. H. Wilson and Dr. C. J. Harbordt have brought the matter up before

every Legislature for the last ten or twelve years. We hope it will become a reality.

Dr. C. J. Prickett, a recent graduate of "Jeff," has located at Cheswold, Del., and is reported as doing nicely.

Dr. G. E. Bringhurst, late of West Chester, Pa., has located at Harrington, Del.

Dr. E. C. Chipman is located at Felton, Del.

All these physicians are members of the Kent County Medical Societies and of the A. M. A.

A son was born to Dr. E. Richmond Steele of Dover on March 1, 1917.

Dr. J. H. Wilson, a trustee at Farnhurst, has resigned on account of ill health. Dr. Wilson at one time was the best known surgeon in the State.

Dr. James Martin, of Magnolia, Del., has been on the sick list, as has Dr. E. H. Nickerson, of Camden.

Dr. I. C. MacCollum has located at Wyoming in the place of Dr. Crossmon, who recently died. Dr. MacCollum is a bright young man and a member of the Kent County Medical Society.

C. deJ. Harbordt, Secretary.

PERSONAL NOTE BY H. J. E.

In obstetrical literature as well as the best practice the use of nitrous oxid-oxygen anesthesia is fast taking the place of the much-vaunted Twilight Sleep. Because of reading I have done, and by talking with men who have used it, I concluded that this was at present the ideal way to give comfort without danger to the patient in labor. One of the greatest arguments in its favor is the possibility of immediately withdrawing the analgesic agent should any cause for so doing appear—something that is not possible once hypodermic medication has been given. I have only within the last two weeks received my own apparatus, and so have been able to try it out on but three cases, but in these it has acted splendidly, in one patient, a primipara of 41, being continued for nearly three hours in the last part of the first and throughout the second stage of labor. It seems that with the introduction of this means of analgesia, any need for the dangerous subcutaneous injection of hypnotic drugs has lost its usefulness.

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In a Lighter Vein

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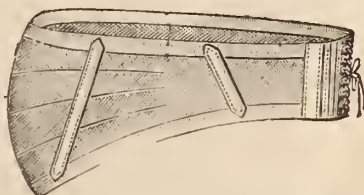
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Editor

DR. W. EDWIN BIRD

907 Delaware Ave.

Wilmington, Del.

Business Manager

DR. J. W. BASTIAN

915 Washington Street

Wilmington, Del.

Assistant Editor

DR. T. H. DAVIES,

Marshallton, Del.

Board of Trustees

HENRY J. STUBBS, President

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THE NURSE-ANESTHETIST AGAIN.

Some few months ago (November, 1916) we called attention to the fact that Ohio had refused to admit the graduates of the Lakeside Hospital, Cleveland, to the examinations for registry as graduate nurses, because, while in the hospital, these nurses were trained (?) to give and permitted to give, general anesthetics to patients, in violation of the Ohio law. This matter was settled and Lakeside again recognized only upon their promise to permanently discontinue the practice complained of. Similar cases are cropping out in Illinois, Indiana and Tennessee, while Kentucky is the latest state in which this question has been decided by a court. In connection with this case we quote the following from the affidavit of Dr. Arthur D. Bevan, of Chicago:

The administration of anesthetics should be restricted to licensed and qualified physicians and dentists, as it is a part of the practice of medicine and dentistry and only physicians and dentists receive proper instruction in its fundamental science and training in its administration. All members of the medical and dental professions, administering anesthetics have conformed to all the education and legal requirements for licensure and interstate reciprocity, in order to assure their certification and competence so that the public may be properly protected.

Anesthesia is not and has never been a part of the duties of nursing. Nurses do not and cannot comply with similar standards and requirements demanded of physicians and dentists administering anesthetics. There is nothing in the registration laws for nurses that confers on them the right

or privilege to administer anesthetics. They are not taught the science or practice of anesthesia in their regular course of training and many lack the preliminary education to even understand the subject. They do not submit to an examination in respect to their competence in administering anesthetics before any State medical board.

Anesthesia is a vital, integral and exceedingly dangerous part of the practice of medicine and dentistry. Surgery and its specialties have come to the point where the operative procedure requires the undivided attention of the operator and he cannot supervise the administration of the anesthetic and operate at the same time and do justice to either or the patient. In many operations the immediate and remote danger of the anesthetic exceeds that of the surgical procedure.

It may be urged that the surgeon can supervise the administration of the anesthetic as he supervises the giving of a hypodermic, an enema, a surgical dressing or an injection of salt solution. The comparison, however, does not hold good. While the dosage of the hypodermic, the quantity and ingredients, the character of the dressing and the character of the hypodermoclysis may all be accurately ordered and forecast, on the contrary there is no fixed dosage for anesthetics for different persons, for certain periods of anesthesia and for certain stages of the operation. Moreover, the entire administration of anesthesia must be governed and gauged by the individual reaction of the patient, and in the majority of instances the surgeon is not in a position to determine these reactions.

Surgeons argue that they should be permitted to select their surgical assistance but such a privilege does not give them the right to determine who shall or shall not practice medicine. This is a function delegated by the Legislature of the various states to their state boards, and nurses administering anesthetics do not comply with the educational or legal requirements of these boards for the practice of medicine or dentistry.

If surgeons were permitted to supervise the administration of anesthetics by nurses, there is no logical reason why nurses should not be permitted to operate under the same supervision; and yet the surgeons who are proponents of the unlicensed anesthetists are the first to complain that their rights are encroached upon when trained nurses invade the domain of industrial first-aid and surgery.

The fact that the vast majority of anesthetic deaths occur during the induction of anesthesia and the earlier stages of the operation, shows that the supervision of the operator is a subterfuge and offers no protection to the patient, whose safety is the first consideration of the law.

Modern anesthesia demands not only a knowledge of the fundamentals of this specialty, but also the complete knowledge only acquired from an exhaustive medical or dental course. The licensed and qualified anesthetist must have the capacity of a consultant and be prepared to diagnose conditions that imperil the safe-conduct of anesthesia and be able to condition the patient for the ordeal. He must have a knowledge and command of all anesthetics and methods of administration so that when occasion demands he can change his agents or technic as the reaction of the patient or the demands of the operation require. The nurse-anesthetist is essentially an addict to one anesthetic agent and one method of administration.

If a new era of anesthesia is to be initiated with the nurse as its chief protagonist, all progress in anesthesia will go into the discard. She is being utilized at present solely on account of her economy, and if her use is permitted to become prevalent the licensed and qualified specialist will have to retire from the practice and teaching of anesthesia on account of having his services undersold.

The specialists in anesthesia have contributed time, money, education and training to conform to the requirements of the law and it would be destructive of the entire future of anesthesia not to make all adminis-

trators conform to the same standards. In some instances nurses have succeeded to the positions developed in certain clinics by the original efforts of licensed and qualified anesthetists, under the pretext that they were administering the anesthetic under the supervision of the surgeon. It seems surprising that in the first instance a licensed expert should have been found necessary and that later on an unlicensed person could render similar service under the direction of another. This situation is a palpable subterfuge for giving an appearance of legality to a very dangerous and unsafe practice.

It is vital that nothing should interfere with the present education of medical students and internes in the science and practice of anesthesia, for no matter what part of medicine or dentistry they follow, they will have need of proper instruction and training in the administration of anesthetics. The nurse-anesthetist cannot achieve to the distinction of a faculty appointment, and medical students and internes will not take kindly to being taught by those who know nothing of medicine although they may have had considerable experience.

In restricting the administration of anesthetics to licensed physicians and dentists, the court and board will be acting in consonance with the legislative policy of all foreign governments—policies that have served very remarkably in assuring safety of the public.

The administration of anesthetics by unlicensed and unqualified persons in England is non-existent. The British Medical Association, the General Medical Council, the British Society for the Advancement of Science, the Royal College of Surgeons, the British Dental Association and the Medico-Legal Society have all endorsed legislation to restrict the administration of anesthesia to licensed physicians and dentists, and the consequence has been that the best ether statistics of the United States show three deaths for every one in England.

Germany, Austria and France are equally strict and stringent in their regulations.

As a surgeon and medical educator I have been very especially interested in anesthesia for a number of years. I have always found it possible to secure the services of a licensed and qualified physician for the administration of anesthetics and for teaching my students and internes. In fact, I have had no difficulty in securing rather outstanding research work in anesthesia from my internes under the guidance of the instructor in anesthesia—an outcome that cannot be duplicated in any instance among the nurse-anesthetists.

The solution of the problem involved lies, as far as the trained nurse is concerned, in having the talented nurse, who desires to become an anesthetist, study medicine and become licensed. She may then be properly equipped and standardized to assure the safety of the individual submitting to operation under anesthesia and she will be an asset to herself and the community.

Very respectfully submitted,

(Signed) ARTHUR DEAN BEVAN.

Sworn to and signed before me this 3rd day of February, 1917,

(Seal) JAMES H. HARPER,
Notary Public, Cook, County, Illinois.

Continuing the Kentucky case we quote from the decision of Judge Kirby, as follows:

By agreement, the usual method of furnishing proof has been waived and affidavits and statements by letter are allowed to be put in evidence, and it may be well at this point to consider some of the matters thus put in evidence.

The surgeon who employs the plaintiff nurse is one of the leading men in the profession. There are many other distinguished surgeons in the city but he is the only one who employs a trained nurse to administer

anesthetics in surgical cases, the others all employing the services of duly licensed physicians or surgeons. This surgeon is not alone in the employment of nurses for such work, however, when the country at large is considered, for in many other cities are to be found a number of eminent surgeons who also employ nurses in their work, and who say that after having tried both the physician or professional anesthetist and the nurse, they much prefer the latter, when qualified. Among the fifty or more surgeons cited by the plaintiffs are Drs. John B. Murphy, of Chicago; W. J. Mayo and C. H. Mayo, of Rochester, Minn., George W. Crile, Cleveland, Ohio, Hugh M. Young, Baltimore, Md., men of international reputation.

Dr. Frank says in his affidavit "that the late Dr. John B. Murphy, one of the foremost surgeons of the world, stated in his Year Book on General Surgery, issued in 1916:

"A nurse properly trained can be just as competent an anesthetist as a medical graduate properly trained; either not properly trained is dangerous, the latter more so than the former, for he has courage without experience, a most dangerous combination in the operating room."

This is truth and common sense and should be kept in mind in the determination of the question.

Turning to the proof for the defendants we have the affidavit of Dr. A. T. McCormack, a member of the defendant State Board of Health, and one who has had a large experience in surgical matters. Among other things he says he has administered the anesthesia for about 1500 surgical operations and has performed approximately 3,000 surgical operations in which surgical anesthesia has been induced. He says:

"It is utterly impossible for the surgeon while performing a surgical operation to personally direct and supervise the administration of an anesthetic with safety to the patient. It is frequently necessary to change from one anesthetic to another during an operation, or to administer powerful stimulants. It is idle to claim that a surgeon with his whole mind and attention riveted on the necessarily important duties of the operation, can at the same time tell that too much or too little of the powerful drug, being inhaled, is being given to the particular patient. To the surgeon, such a claim is specious whatever the locus of the particular operation, but any man will recognize its absurdity when the surgeon is operating about the rectum or vagina when he cannot even see the anesthetist or the patient's head. He may direct the particular kind of anesthetic in a given case, but there is no test or method so far devised that permits the most experienced to say that some emergency will not arise rendering the anesthetic agent ordered before hand neither safe nor effective throughout the operation, and the surgeon could only actually supervise such a condition at the greatest risk of delay and danger to the unconscious patient.

In concluding his opinion, Judge Kirby ruled as follows:

Dr. Frank and other physicians employing trained nurses say that in so doing they assume the responsibility. Where the trained nurse is known to them to be competent they make take the responsibility, but it is a responsibility, the extent of which they probably have not duly considered. In a suit growing out of the death of a patient where the surgeon had voluntarily employed an anesthetist who was not licensed, he would, in the event of his brother physicians testifying, as in this case, certainly be held responsible. But even without such testimony the prima facie case would be against him.

This is a police regulation designed for the protection of society, and in all such matters the right of the individual must be laid aside for the safeguarding of the public.

The Court finds in favor of the defendants and an order to that effect will be entered.

SAMUEL B. KIRBY, Judge.

March 10th, 1917.

This order disposes of the question in Kentucky, the defendants being the State Board of Health, the decision sustaining their contention that the nurse who gave an anesthetic was actually practicing medicine.

This same question is bound to come to the fore in Delaware sooner or later. The law on the subject here is none too explicit, yet we venture the opinion that the nurse-anesthetist will lose any suit brought under the Delaware law, provided she receives pay for her services. We quote the following from the Laws of Delaware, 1907, Chapter 40, Section 20: (the black face type are ours):

For the purposes of this act and the act to which this is an amendment, the words, practice of medicine, or surgery, shall mean to open an office for such purpose, or to announce to the public, or to any individual, in any way, a desire or willingness or readiness to treat the sick or afflicted in any county in the State of Delaware, or to investigate or diagnosticate, or to offer to investigate or diagnosticate any physical or mental ailment, or disease, of any person, or to give surgical assistance to, or to suggest, recommend, prescribe or direct for the use of any person, any drug, medicine, appliance or other agency, whether material or not material, for the cure, relief or palliation of any ailment or disease of the mind or body, or for the cure or relief of any wound, fracture, or bodily injury, or deformity, after having received or with the intent of receiving therefor, either directly or indirectly, any money, gift, or any other form of compensation. It shall also be regarded as practicing medicine within the meaning of this act if any one shall use in connection with his or her name, the words or letters Dr., Doctor, Professor, M.D., M.B. or Healer, or any other title, word, letter or other designation which may imply or designate him or her as a practitioner of medicine, or surgery.

We say this question will be a vital one here because one of Delaware's leading medical institutions has just officially adopted the nurse-anesthetist. This alone would not force the question to a decision, but, without intending the slightest reflection as to her merits, or efficiency or training in nursing, the fact remains that under this regime a death due to the anesthetic would force the surgeon in any such case to take steps to protect his own professional reputation. Should such an unfortunate occurrence take place, we feel certain the courts would be asked at once to decide the status of the nurse anesthetic under the Delaware laws. Our own opinion is that, much as we regret to say so, the institution referred to has taken a distinct step backwards. Anesthesia is fast becoming a distinct specialty, and the institution that refuses to recognize that fact is deliberately throwing its face counter to the tide of medical progress.

Serum Therapy of Pneumonia

By EMIL MAYERBURG, M. D., of Wilmington.

The treatment of pneumonia, as far as statistics show in the past few years, has not lessened the mortality. Since the advent of the fresh air treatment, which we all know to be our one main support, no one remedy stands out above another. As far as general therapy goes, suffice it is to say sodium bicarbonate with plenty of water answers as well,

in the general run of cases, as spécial mixtures of this and that and what not.

We know that the heart is the organ that fails us, and in the majority of cases is overcome with the profound toxemia while laboring under a double load. It is needless to say that it must be watched closely and stimulation must be instituted at the proper time.

When we enter upon the study of a specific treatment of this disease we have much to consider, and our deductions must be careful and accurate. Almost any writer can make a treatment appear good when reporting a given number of cases, and it is only by careful study of a long series of cases that any true and accurate claims can be made for a specific treatment.

On the other hand, we do not believe that in the face of present-day knowledge as to the cause of the disease, there can be any one specific treatment. However the work along the lines of a serobacterin product seems to fall very near to filling the proper place.

In reporting the ten cases that were treated with subcutaneous injections of serobacterin, containing 50,000,000 pneumococci and 100,000,000 streptococci per cc., we do not want to make any great claims for this method of treatment. However the results that we obtain are food for thought and are indeed very encouraging.

In reporting the cases I will not go into the history of the cases or give any of the clinical signs, for each case was a well marked case of pneumonia in which we feel that there was no reason to doubt the diagnosis.

No other treatment was given except for the initial purgative and stimulation when deemed necessary. Each case is reported, giving the temperature, pulse rate, and respiration before giving the bacterin treatment and the result of the administration on these three after giving.

Case 1.—Admitted April 5th, temperature 104, pulse 120, respiration 40. Treatment; patient put on porch; Strepto-Pneumo-bacterin, $1\frac{1}{2}$ cc., (containing 50 million pneumococci, 100 streptococci); given twenty-four hours after admission, temperature 104, respiration 32, pulse 132, and in 12 hours temperature dropped to 99.3, pulse 120, respiration 28. Twenty-four hours later, second dose given when temperature dropped to normal, pulse 100, and respiration 28, and remained so. Patient discharged on 14th day of April, 1917. Duration of disease, 10 days.

Case 2.—Admitted April 6, 1917, with well-marked lobar pneumonia. Temperature on admission 103, pulse 96, respiration 36. Pneumo-bacterin given, $1\frac{1}{2}$ c.c. No varia-

tion in temperature until second day. Temperature 105, pulse ranged between 100 and 120, respiration between 32 and 40 for the succeeding three days; during this time $1\frac{1}{2}$ c.c. serum was given every 24 hours. Soon after the last injection the temperature dropped to 103, then to 100, and then to normal in 12 hours, and remained normal throughout. Patient discharged April 17th, 1917, crisis occurring on 4th day. Duration, 12 days.

Case 3.—Admitted February 6, 1917 with well-marked signs and symptoms of pneumonia (lobar), temperature 103, pulse 100, respiration 40. This patient was unconscious and had endocarditis with a mitral a regurgitant murmur. Treatment: Pneumo-bacterin, $1\frac{1}{2}$ cc. Temperature 12 hours later, 99.3, pulse 88, respiration 32. Patient was given $1\frac{1}{2}$ cc. every 24 hours, for 4 doses. Temperature varied for next few days, never going above 100. Crisis on second day, patient discharged February 18, 1917. Duration, 13 days.

Case 4.—Admitted March 8, 1917, had been ill about 6 hours, at that time having a convulsion. Temperature 105.4, pulse 140, respiration 40. Treatment: Pneumo-bacterin $\frac{1}{2}$ cc. Temperature in 12 hours, 103, pulse 132, respiration 32. In 24 hours, temperature 99.2. Then temperature went up to 105.3, then $\frac{3}{4}$ cc. serum was given and temperature in 13 hours dropped to 101. Eight hours later, the temperature went up to 105.3, and finally went to 106, when 1 cc. of serum was given. Temperature dropped to normal, pulse 128, respiration 28, with no more rises. Patient discharged March 15th, 1917. Duration, 8 days.

Case 5.—Admitted April 12, 1917, with signs and symptoms of broncho-pneumonia. Temperature 102.2, pulse 108, respiration 58. 1 cc. of pneumo-bacterin was given. Temperature dropped to normal within 12 hours and did not rise again. Patient discharged April 18, 1917. Duration, 7 days.

Case 6.—Admitted April 12, 1917. Temperature 102.2, pulse 90, respiration 26, signs and symptoms of lobar pneumonia. On the fourth day serum was given. Temperature at that time 103.3, dropped within 9 hours to normal and did not rise again. Pulse 82, respiration 24. On the average when discharged on April 24, 1917. Duration, 12 days.

Case 7.—Admitted April 16, 1917, with well-marked symptoms and signs of lobar pneumonia. Temperature 104, pulse 140, respiration 32. Pneumo-bacterin, $\frac{1}{2}$ cc. given. Twenty-four hours later, temperature 106, pulse 136, respiration 40, $1\frac{1}{2}$ cc. pneumo-bacterin then given, and in 24 hours the temperature dropped to 99.2, and did not rise above that at any time. Patient discharged April 28, 1917. Duration, 13 days.

Case 8.—Admitted April 24, 1917, temperature 103, pulse 120, respiration 36; pneumo-bacterin given, and in 12 hours temperature 100.2, pulse 112, respiration 28. Six hours later, temperature 101, pulse 100, respiration 26. Another dose of bacterin was given and in 15 hours temperature 98.4, pulse 92, respiration 28. No increase after this. Patient discharged May 1, 1917. Duration 8 days.

Case 9.—Admitted April 25, 1917, temperature 101.3, pulse 96, respiration 28. Bacterin was given and 12 hours later temperature was 99, pulse 96, respiration 28. Only slight variation thereafter. Patient discharged April 29, 1917. Duration, 5 days.

Case 10.—Admitted April 25, 1917, temperature 105, pulse 100, respiration 34. Bacterin given, $1\frac{1}{2}$ cc. Twenty-four hours later, temperature 100.2, pulse 90, respiration 26. Another $1\frac{1}{2}$ cc. was given 24 hours later. Temperature then 102, pulse 40, respiration 28. Then temperature came to normal and stayed there. Discharged May 2, 1917. Duration, 7 days.

In summarizing of these cases, we wish to call your attention to the fact that each of the cases showed a typical crisis. This we have found in the past few years has not been so commonly the general rule.

We have found, especially at the hospital, that the pneumonias of the past two winters have not as a rule ended by crisis. Whether or not the administration of the sero-bacterin precipitated the crisis we are not prepared to state, but it is a singular fact that each of the ten so treated had a typical abrupt ending of the symptoms.

The patients remained much more comfortable, their toxicity was not so profound, and their temperature was lower in each case after the administration of the sero-bacterin. We are prepared to state that we fully believe that the serobacterin has these effects in a clearcut, typical case of lobar pneumonia, viz.: It lessens the toxicity, controls the temperature to a certain degree, and tends to keep the patients more comfortable, relieving greatly the labored respirations.

In concluding, I wish to thank Drs. M. I. Samuel and B. H. Beehler, for their aid in preparing this paper and studying these cases with me.

There are at the present time in the United States an average of one physician to about 640 persons, the proportion varying as to locality—1 to 460 in New York City, 1 to 580 in Chicago, 1 to 245 in Washington, D. C. (Why the capital of the country has so many physicians is an interesting problem.)

Miscellaneous

THERAPEUTICS.

Diphtheria Immunity Test (Schick Test.)—This test is intended to determine those persons who have not in their blood an amount of diphtheria antitoxin sufficient to render them immune to diphtheria. The test is of special value for use in institutions and among groups of persons exposed to diphtheria, in order that it may be determined which individuals should be given an immunizing dose of diphtheria antitoxin.

Diphtheria Toxin Standardized (Schick Test.)—Marketed in sealed capillary tubes each containing a solution of one-fiftieth of a minimal lethal dose for guinea pigs or diphtheria toxin. H. K. Mulford Co., Philadelphia, Pa., (Jour. A. M. A., Jan. 15, 1916, p. 191.)

HEALTH.

Give me no gold, give me no wealth,
Give me but firm and truthful mind,
Give me the joys of radiant health—
Give me but life—leave all behind!

The pomp of wealth shall change to dust
With but one wink of human eye;
The joys of health shall make us trust
The pow'r of God that reigns on high!

True Friendship's bond shall stronger be
When health inspires the realms of thought,
And Wisdom's light shall shine more free
When in sound health our life is wrought!
—Philippine Islands Bulletin.

A COLLECTIVE STUDY OF 2,000 CASES OF "TWILIGHT SLEEP."

By A. J. Rengy, New York.

In this article Dr. Rengy, who has had personal experience with 300 cases in fifteen months, and who has received reports from 2,000 other cases, gives a resume of the recent standing of "Twilight Sleep," as it appears from this

experience. After impressing again the fact that this method is applicable only to selected cases, mostly primipara, and that the constant personal supervision by a specially trained obstetrician is absolutely essential, he brings up this material question, "Is a labor to be regarded painless merely because a patient fails to recollect?" He concludes that the painlessness is only relative in all cases, and that it varies greatly within the limits of partial analgesia. The second stage is definitely prolonged in all cases, and the increase in low forceps operations is proportionate. He thinks that the adoption of the method should be decided for or against by its effectiveness on pain, not memory, and, as the amount of analgesia present is variable and doubtful, it is not proven to be the ultimate in our search to diminish the pain of the lying-in woman.

THE UNITED STATES PUBLIC HEALTH SERVICE ASKS DO YOU

Clean your teeth and then
Expectorate in the washbowl?
Omit lunch to reduce weight and then
Overeat at dinner?
Go to the country for health and then
Sleep with your window shut tight?
Wonder why you have earache and then
Blow your nose with your mouth shut?
Think dog muzzling cruel and then
Marvel at the spread of rabies?
Carefully select your brand of liquor and then
Feed your children unpasteurized milk?
Repeat the Golden Rule and then
Sneeze in somebody's face?
Go camping for your health and then
Place your toilet so that it drains into your water
supply?

SLANDERING THE FORD.

A chiropodist received a call from a woman stopping at the hotel and on being shown her room, found her in a kimono. "Will you promise to trim my corns and keep your mouth shut?" asked the woman. He assured her he would, but began to protest when she started to remove her kimono. "Lady, lady," he implored, "you mustn't do anything like that." "Listen to me," said the woman heatedly, "I've ridden all the way from Colorado in a Ford and I guess I know where my corns are better than you do."

In a Lighter Vein

THE EMBARRASSMENT OF A DOCTOR, A LADY AND A THIEF.

A doctor in New York relates the following as a true story. He tells of a patient, a lady of delicate sensibilities, who was suffering from an intestinal toxemia. He requested samples of both stool and urine for laboratory examination. The lady protested and delayed for six weeks, but eventually produced the coveted specimens, each in a glass jar properly labeled with name and address.

The doctor placed the jars in a satchel which he deposited in his automobile, and started with much satisfaction for a nearby clinical laboratory. On the way, however, he stopped to visit a patient—and thereby hangs a tale. Alas! on returning to his car, the bag with its neatly labeled jars had disappeared. Gone—stolen, those aids to diagnosis. The doctor's wrath was unbounded.

The lady on being told of the loss, received the information with horror. She not only indignantly refused the doctor's modest request for duplicates, but threatened suit for loss of originals. Had he not permitted those jars bearing her name and address to fall into strange and unappreciative hands? Oh! what would the thief think?

THE MODERN MARY.

Mary had a little lamb,
A lobster and some prunes,
A glass of milk, a piece of pie,
And then some macaroons.
It made the naughty waiters grin
To see her order so,
And when they carried Mary out
Her face was white as snow.

Husband was home that afternoon and when wife told him that she expected a party of guests, he made haste to put away all the umbrellas in the hall.

Surprised, the wife asked: "Do you fear my guests will steal your umbrellas?"

"No, dearie," said he, "but they will recognize them."—Exchange.

REASONS WHY PHYSICIANS SHOULD PATRONIZE ADVERTISERS IN THEIR OWN STATE JOURNAL

The reasons why physicians in other States should patronize the advertisers in their Journals, apply as well to you and your Journal. It's perfectly simple; if you will buy goods from the advertisers, you will have a better Journal. Read the "reasons why":—

ARKANSAS:—These advertisers would not be here if they were not reliable. Your support protects you, helps us and pleases them.

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CALIFORNIA:—The firm that does not advertise its goods to you, does not feel under obligation to sell you what you order. It pays to buy the advertised article.

COLORADO:—This is your Journal. The advertisers help support it. Tell them you saw their announcement in your Journal.

DELAWARE:—Every advertiser in this Journal is paying a rebate to every subscriber. If these ads were not here, this Journal would either cost you more or die an early death. Support the firms who support you.

FLORIDA:—We urge our readers to look carefully over our advertising pages, and let it be known we are a live profession and have needs to be filled.

GEORGIA:—Every member of the State Association has an interest in the advertising columns. If one firm advertises and another does not, patronize the one that does. It is money in your pocket.

INDIANA:—It costs you only a 2-cent stamp to write any one of our advertisers, all of whom are anxious to get in touch with you by sending you either samples or catalogs.

IOWA:—Quite a good deal of our advertising is on trial, and unless our readers demonstrate their interest in it, we will lose it.

KANSAS:—Every advertiser in this Journal is paying you for the privilege of telling you about the things he has to sell.

KENTUCKY:—You may depend on our advertisements as a safe and sound business directory.

MAINE:—Look through the advertising pages each month. Place orders with these concerns. Specify their products on your prescription.

MARYLAND:—Our readers may depend on the integrity of our advertisers. Reciprocity is not only desirable, it is a good business principle.

MICHIGAN:—Answer the advertisements. This is important. If you are busy, have your wife do it.

MISSOURI:—Anything in the line of physicians' supplies or equipment, can be obtained from firms advertising in The Journal.

NEBRASKA:—The Journal desires to introduce you to the merchants whose goods are advertised, and ask that you become their patrons.

NEW JERSEY:—If the goods advertised in this publication are equal in quality (and we hold they are superior in many respects,) you should purchase them in preference to those not advertised with us.

NEW MEXICO:—Write: "I saw it in The New Mexico Medical Journal" whenever opportunity offers. Let us all pull together.

NEW YORK:—Any Medical Journal printing the fraudulent claims contained in the advertisements of the nostrums condemned by the Council on Pharmacy and Chemistry is an accessory to this act of thievery and the subscriber to such journals voluntarily assumes the position of an accomplice.

NORTHWEST:—Prove to our advertisers that advertising in Northwest Medicine is a paying investment. Don't forget to state that the business is sent there way because they advertise in your Journal.

OHIO:—Every dollar spent with our advertisers is a dollar contributed directly to the betterment of your Journal.

OKLAHOMA:—Many of us no doubt are spending the aggregate large sums of money with houses and companies who never spend anything with us. It is not good business policy to follow such a short sighted plan.

PENNSYLVANIA:—Most of our members throw dollars in the waste basket and refer to the advertising pages of The Journal for needed information.

SOUTH CAROLINA:—We could not run a Journal without the advertisers, and our constant effort has been to accept only the highest class of business.

TENNESSEE:—The advertisers of The Journal are dependable concerns, who offer the best that is to be had. You are protected when you buy from them.

TEXAS:—Our advertisers are guaranteed to us, and in turn guarantee them to our readers. Is that worth anything to the prospective buyer?

VERMONT:—If any advertiser is not absolutely honest in his practice, his business is not acceptable.

WEST VIRGINIA:—When writing advertisers, please be sure to mention the fact that you are writing them because you have felt that they deserve support since they are carrying pages.

WISCONSIN:—Goods and institutions advertised in this publication are absolutely reliable, and every dollar spent with your advertisers is a dollar contributed directly toward the maintenance of your Journal.

We urge every physician who reads this, to adopt these excellent recommendations in his own practice. Do it for the advancement of ethical medicine; for the immediate benefit it will be to you personally in securing reputable goods, and just prices; to encourage reputable firms to patronize your Journal and for the satisfaction and pride you will have as a joint owner, in the success of your Journal.

Your Editor.

Security Trust and Safe Deposit Co.

Sixth and Market Streets

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banking. Administration of
Estates, Management of Real
Estate, Storage of Valuables

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No. 6

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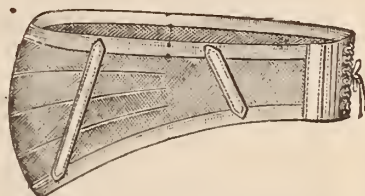
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" C	"	0.01	" " " " "
" D	"	0.02	" " " " "

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Business Manager

DR. J. W. BASTIAN

915 Washington Street
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PUNISHING PATRIOTISM.—What is to become of the practice of the doctor who goes to war? Some of these men have gone, others are ready to go and still others contemplate going later. Must all these lose their practices in toto because they are patriotic enough to respond when their country calls them? Assuredly, no. While no official action has been taken yet in Delaware, to care for this urgent contingency, it will have to be done, and that speedily. A plan has been evolved in a bordering State that has been officially adopted by over a dozen States as offering the fairest solution of this problem yet proposed. Only a couple of weeks ago, the New York State Medical Society adopted it. It is being referred to as the "Maryland Plan," since it was born in Baltimore, and speedily adopted last month at the annual meeting of the Medical and Chirurgical Faculty of Maryland.

The following extract, from the Baltimore Sun of May 10, is sufficiently complete to show what this plan is:

PROTECT WAR DOCTORS.

A system designed to protect the private practices of Maryland physicians who go to France, or who are called directly into the army or navy has been devised by the Medical and Chirurgical Faculty and the Medical Preparedness

Committee, of which Dr. Hugh H. Young is chairman. Patients, doctors who stay at home, and the State medical organizations have combined to end the "punishing of patriotism."

Doctors who have already left Maryland for France and those who will go thereafter, are sending their patients the following letter:

"As a member of the Reserve Corps of the United States Army (or Navy), I have been ordered into active service by the Government and on that account I am writing to you of this fact, so that in case of illness you may summon some other doctor to attend you."

RECOMMENDS ANOTHER DOCTOR.

Here he names another doctor who will have consented to attend the soldier-doctor's patients, and "heartily recommends" him.

The doctors who stay at home are asked to sign and mail to the Secretary of the State Society, the following agreement:

"I agree to abide by the resolution adopted in relation to fees for attendance on patients of doctors ordered into active service for the Government, and to keep such books as will readily show collection of such fees. I further agree to ask every patient whom I have not previously treated the name of his usual or last medical attendant, and if such doctor is in the active service of his Government, to turn over him monthly or quarterly to such physician, or to his family, if he so directs, one-third of the fees collected by me from this patient."

CONSULTATIONS ALSO AFFECTED.

"I further agree that when patients are referred to me by a physician or person who has not heretofore referred patients to me, to find out to whom, in the immediate past, they have usually referred their patients requiring the special services I can render, and if such physician is in the active service of his country, to turn over to him one-third of the fee collected from such patient. This shall likewise apply to consultations.

"I further agree not to attend any patients referred to above for a period of one year following the resumption of active practice by the physician who has been in active service. In the remote chance of misunderstandings or disagreements arising under this resolution, I agree to submit the facts to the Board of Censors of the County Society and abide by their decision."

SENT TO 2,300 MEDICAL MEN.

A copy of the letter to be sent to patients by soldier-doctors, a copy of the agreement to be signed by doctors who stay home, and a copy of a resolution upon which the whole plan is based have been sent to 2,300 doctors in Maryland.

Let each County Society in Delaware adopt similar resolutions *at once*, for our men are soon to go. Then, in October, at the State meeting the actions of the local bodies can be ratified by the State Society.

Appendicitis As a Complication of Pregnancy

By AIME PAUL HEINECK, M. D., Chicago, Ill.

Having had some personal cases in which appendicitis complicated pregnancy, I was led to investigate the subject. I consulted the French, English and German literature of the last twenty years, pertaining to this condition. As a result of this study, I feel that the following conclusions are warranted.

1. Appendicitis occurs at all ages and in both sexes. It presents to all medical men important diagnostic, prognostic, and therapeutic features.

2. Appendicitis acute, or chronic, initial, relapsing or recurrent, primary or secondary, complicates pregnancy with greater frequency than is believed. It is the most important surgical complication of pregnancy.

3. It occurs in single and twin gestations; in first, early and late pregnancies; in primiparae, deutiparae, and multiparae.

4. It occurs at all periods of the child-bearing age and at all periods of gestation. It complicates both intra and extra-uterine pregnancies and can co-exist with other disease processes to which it may be primary, secondary or coincidental.

5. Gestation exerts no untoward influence upon the normal appendix. It can and frequently does aggravate existing, or determine new inflammatory disturbances in appendices deviating from the normal in form, length, mobility, location, etc.; in appendices bound down by adhesions or the seat of inflammatory or other degenerative changes.

Pregnancy does not lessen the dangers of appendicitis; it aggravates them.

6. Appendicitis and uni or bilateral tubal pregnancy are frequently mistaken for each other. They may occur simultaneously or consecutively, may be either primary or secondary to, or independent of each other.

7. In appendicitis, in ectopic pregnancy, and in combined appendicitis and ectopic pregnancy, of obscure symptomatology, it matters not whether you are certain or in doubt as to the real diagnosis, early and timely operative treatment is imperatively indicated.

8. During gestation, every type of appendicitis may occur: Adhesive, gangrenous, ulcerative, obliterative, catarrhal, perforative and suppurative.

9. Appendicitis with adhesion formation is of great significance because adhesions of inflammatory origin can (a) incarcerate the pregnant uterus in the pelvis and mechanically hinder the enlargement of the uterus; (b) impair the contractility of the uterus; (c) interfere with uterine labor contractions; (d) entail subinvolution; (e) induce sterility; (f) disturb tubal and ovarian integrity of function and of structure; (g) determine ileus; (h) produce abortion, and, (i) lead to extra-uterine pregnancy.

10. Chief among the co-existing pathological conditions noted in appendicitis are simultaneous or consecutive inflammation of the uterus, tubes or other pelvic organs. The close anatomical relations existing between the appendix and the pelvic organs explain their frequent association in disease processes.

11. Appendicitis has a greater morbidity and a higher mortality in the pregnant than in the non-pregnant, operated or non-operated. It may terminate pregnancy.

12. The symptomatology of appendicitis in the pregnant is the same as in the non-pregnant. The clinical picture, however, is blurred by the co-existing symptoms of pregnancy. Diagnostic mistakes may be lessened by keeping in mind that appendicitis occurs in pregnant women; that a history of previous attacks during the same or previous pregnancies can frequently be elicited by thorough and deliberate physical examination. With care, one can in these cases almost always arrive at a correct diagnosis.

13. To establish with certainty the diagnosis of appendicitis during pregnancy, it is necessary to exclude the presence of myalgia due to stretching of abdominal muscles, typhoid fever, ruptured or non-ruptured tubal pregnancy, cholecystitis, salpingitis, ovaritis, adnexitis, ovarian cyst with or without a twisted pedicle right-sided pyelitis and ureteritis, fecal impaction, hepatic and nephritic colic. At

times, any of the aforementioned conditions so closely resemble appendicitis as to cause diagnostic errors and operative mistakes.

14. The morbidity and mortality of appendicitis complicating pregnancy and the puerperium are the morbidity and mortality of delay in applying efficient surgical treatment. The initial symptoms of the attack do not enable the clinician to foretell accurately how a given case will terminate. What is going to happen in ten, twenty or forty hours following the onset of appendicitis cannot be foreseen. When the condition is diagnosed and remedied early, the mortality is practically nil. Abscess formation may be forestalled by early diagnosis and early operation. The high mortality is due to late diagnosis and later operation. The pregnant woman whose metabolism is good is a good subject for operative measures.

15. Prognosis is better for the mother if there be no interruption of pregnancy, spontaneous or otherwise. The bad attacks cause abortions and abortion aggravates the illness. In the great majority of surgically treated cases, there is no interruption of pregnancy and when it does occur it is not due directly to the operation. The interruption of pregnancy is not indicated. It aggravates the prognosis. The fetal prognosis is good in early operated cases.

16. The following prophylactic measures are sound and safe and are recommended for general adoption: (a) During the child-bearing age, recurrent attacks of pelvic pain, dysmenorrhea, menstrual and other pelvic disturbances unassociated with objective pelvic findings and are infrequently due to unrecognized appendicitis or sequelae thereof. In the presence of this etiological factor, the ablation of the appendix is indicated. (b) In laparotomies for conditions other than appendicitis, the appendix should be examined. Should it present any deviation from the normal, its removal is indicated. (c) During the child-bearing age, any woman who has had one or more attacks of appendicitis treated non-operatively should have her appendix removed so as to correct existing pathological conditions and prevent future attacks of appendicitis and complications incident thereto. True prophylaxis in a woman of child-bearing age who had had one or more well marked attacks of appendicitis is an interval operation. It goes without saying that constipation is to be avoided and that other hygienic precautions are to be observed.

17. A definite and accurate diagnosis of acute, chronic or recurrent appendicitis, irrespective of the stage of pregnancy, invariably calls for operation. The disease during pregnancy runs such a rapid destructive course that delay

is hazardous. Operation should be immediate. A case may be rendered hopeless by hesitation and inaction. Temporizing methods are extremely dangerous.

18. Treat appendicitis in the pregnant female as you treat it in the non-pregnant. Every pregnant woman who is a subject of appendicitis should be operated on just as soon as the diagnosis is made, whether the attack is the first, second or third.

The unusual risks of leaving a diseased appendix in the abdominal cavity are much increased by the pregnant state and the evil consequences of another attack, i. e., gangrene or perforation will be correspondingly greater. The danger of recurrence in the later months of pregnancy and in the child-bed period calls for operation preferably during the attack. If the patient is not seen in time, one will do the next best thing, an interval operation during the pregnancy. Pregnancy is an additional indication for operation in cases of appendicitis.

19. In inflammatory diseases of the appendix, the ideal operation is an appendectomy. In some cases, however, one has to be content with incision, evacuation and drainage of an appendiceal abscess. Exceptionally drainage of abscesses in Douglas' pouch may be affected through the vagina or rectus. Pus should be evacuated irrespective of the uterine contents, and irrespective of its location.

20. It is well to keep in mind that for an appendectomy the median incision is contra-indicated in the later months of pregnancy, that it is best to avoid or to reduce to a minimum the manipulation of the uterus; opiates are indicated in the after treatment. Labor when it occurs shortly after a laparotomy is not to be unduly prolonged; it may have to be assisted.

HYPOPYON-KERATITIS

By R. B. HOPKINS, M. D., Milton, Del.

Case report. Male, aged 65, received a contusion of cornea. Three days from accident he first called to see me. I found an ulcer the size of a large pin-head in the center of the cornea; the conjunctiva was highly congested as was also the iris; and the pupil was contracted almost to pin-point size. The temperature was 99 degrees Fahrenheit.

Treatment—I cauterized the ulcer with lunar caustic and instilled atropia until pupil was dilated. The following day I found hypopyon, 1-16 inch, in lower legment of cornea. I then ordered hot fomentations kept constantly on eye for twenty-four hours. Upon my next visit I found the hypopyon had entirely disappeared.

There was considerable chemosis, for which adrenalin, 1-2000, was instilled into eye four times a day, and the following collyrium was dropped into eye every half hour: Rx. acidi borac, gr. X; zinci sulp, gr. 1; aquae dest. ad., oz. v. oz. I.

The third day I again cauterized the ulcer with lunar caustic, full strength, as the ulcer presented an unhealthy appearance. The fourth day the ulcer had sloughed, and presented a healthy granulating surface. The collyrium was continued at one and two hour intervals. The patient finally made a good recovery.

I report this case as an exceptional recovery, owing to the fact that I saw it comparatively early. Two previous cases which I saw later, resulted differently. In one, the anterior chamber was half-full of pus, for which I made a section through cornea and evacuated same and cauterized the ulcer, but the patient, while retaining the ball of the eye, entirely lost the sight, owing to an advanced stage of uveitis. The second case was somewhat similar: Iritis was extreme, hypopyon was far advanced, and the section entirely removed the pus, yet the ulcer had advanced to such a condition, the bulging of the cornea resulted, causing so much pain that para centesis was necessary, but later the cornea was reduced to such a small size and the sight entirely gone that enucleation was finally resorted to in order to save the remaining eye.

Conclusions—The early resort to cauterization, the instillation of atropia, until mydriasis is obtained, and especially the application of hot antiseptic fomentations is the "sine qua non" in the efficient treatment of hypopyon keratitis in its early stage.

Saline purgatives were given, which I think is very essential in draining the congestion, and assisting in absorption of pus from the anterior chamber of the eye.

HEARD AMONG THE NURSES.

To the moment that's the fleetest—

Hold it fast;

The first kiss is the sweetest—

Make it last.

Miscellaneous

WILMINGTON ITEMS.

P. & S. Hospital.—A three-story annex to the Physicians' and Surgeons' Hospital is now under way, the foundations being nearly completed. The new wing will provide space for 40 patients, new and complete surgical departments, and a new dispensary. The nurses will also be quartered in the new wing, which will measure 30 x 80 ft., and cost approximately \$30,000.

Miss Sarah Murphy, superintendent of the hospital since its infancy, resigned that position on May 31, to engage actively in Red Cross work. Her place is being filled temporarily by Miss Jamison.

A clinical laboratory has been installed in the hospital and the rule established that every patient admitted must have a complete urin analysis and a blood count. This laboratory is in the hands of an expert, Miss Sisley, who was technician for four years at the Philadelphia Polyclinic, and who has been for the past four years private technician for Dr. Judson Daland.

Miss Sisley will do private work for doctors at the following charges:

Urinalysis, single specimen	\$1.00
Urinalysis, P. M. and A. M. specimens.....	1.50
Urinalysis, 24 hour, including quantitative urea estimation, quantitative albumen and glucose	2.00
Full examination of gastric contents, including microscopic and pepsin digestion	2.00
Full feces examination	1.50
Sputum examination	1.50
Complete blood, including differential count	2.00
Blood examination, without differential.....	1.50
Wassermann reaction	5.00

N. B.—The Wasserman examination will be made on Fridays, unless otherwise specified. The patient's blood should be collected and sent to Miss Sisley in sterile tubes, the day before, for preparation.

Delaware Hospital.—The Training School for Nurses, held their commencement at the hospital on May 15. The invocation was made by Rev. Walter A. Hearn, of Grace M. E. Church, followed by an address by Dr. J. W. Bastian. The diplomas were presented by Hon. Thomas Bayard, pres-

ident of the Board of Trustees. Vocal and instrumental music was interspersed. The class of 1917 enrolls the following: Misses Clara Maude Conley, Frances R. Downs, Evelyn Frantz Gibson, Emma M. Hild, Anna Willey Jones, Emma Kloeppel, Lettie Edith May, A. Christina Seitz, Ethel Tammany, Christina Leonarde Taylor, Nellie Ward and Laura E. Wood.

The prize for the best standing throughout the course was awarded to Miss Taylor.

The following night the usual reception and dance was held and proved to be a very popular and enjoyable affair. The number of physicians who attended was large.

A flag raising was held on Decoration Day, which was also quite largely attended.

Going to War—The following Wilmington physicians have gone, or are about to go to the war: Drs. Conrad Cleaver, W. H. Speer, R. R. Spahr, M. I. Samuel, W. A. Fisher, E. H. Lenderman, B. A. Jenkin and M. B. Holsman. Five or six others are planning to go as soon as their individual affairs can be satisfactorily arranged.

SPEAKING OF PROFESSIONAL PROSTITUTES.*

In a recent civil suit in the Hamilton county courts a well known member of the county bar (former Judge Littleford) is reported to have testified:

"I knew there was nothing in court so absurd but you could get the best doctors to testify it was all right, provided they got enough money for it." * * * "That is my experience after 33 years' of practice. All they want is the money. It is a question of who gets to the doctor first. They would prove anything on either side of the case—that has been my experience with them." * * * "It is the only question in a community, who gets there first with the money, provided you have the most. If you get there with \$10.00 he probably won't come, but if the other side gets there with \$50.00 he will go to work and prove anything."

Naturally, the publication of so intemperate a quotation caused widespread indignation within the medical profession—the integrity of which was challenged. Since the demise of The Lancet-Clinic, the doctors of Cincinnati have no direct means of meeting attacks like these, so Health Officer Landis came to their rescue in the weekly bulletin published by the Board of Health. Dr. Landis is a past master in the art of "talking turkey." Like his distinguished brother—Federal Judge Kenesaw Mountain Landis of Chicago—he is

more than likely to remove a portion of the hide when he starts out to administer a verbal skinning. Judge Littleford's reputed remarks seem to have aroused Dr. Landis' ire, as witness the following from the bulletin of December 16:

"Judge Littleford has very probably been misquoted or qualifying statements have been eliminated from his testimony as it appears in the press.

"No sane man would make the sweeping statement credited to Judge Littleford. It is as erroneous to state that all physicians have their price as it would be to state all lawyers are on the square and above reproach. Both professions are long overdue for a housecleaning.

"Simple fumigation would probably meet the requirements of the medical profession. Mechanical cleansing with soap and water, followed by liquid germicides and fire, ought to improve conditions in the legal profession. Create a demand for something and the supply is forthcoming.

"The lawyers have made the rules governing testimony and too often stand in the market place bidding for liars.

"When you find a prostituted medical expert selling his honor to the highest bidder you will invariably find a member of the legal profession playing the part of procurer.

"The financial returns, due to intellectual white slavery, are divided between the intellectual white slave and the procurer, the latter getting the lion's share of the dirty money.

"The courts, and by the courts is meant the entire legal profession, know that the present rules place a premium on perjury and that the simple expedient of court appointed and court paid experts would eliminate the greatest scandal in the two professions.

"I believe that a respectable majority of attorneys are honorable men. I know that the overwhelming majority of physicians are a credit to their profession and to mankind.

"Isn't it possible for the two to bring about changes in the rules governing expert testimony that will restore public confidence in both professions?"

In our humble opinion, Judge Kenesaw Mountain Landis couldn't have said it better.

And, incidentally, wouldn't it be well for the medical and legal profession to join hands in this state and give serious consideration to the last paragraph?

*Editorial, Ohio State Medical Journal, February, 1917.

THE HIGHER AND FEWER.

One may eat and grow thin or starve and stay stout these days; but at all events he must keep himself well, for

the doctors, beginning with those of up-state Pennsylvania, are going to raise their rates. A daytime call may be had for \$1.50, it is true, but from 6 to 9 p. m. the doctor will be available only at \$2; while after the curfew has tolled his services will jump to \$3 a visit. It may be a good thing for us that food costs so much, since we can't pay for enough of it to get sick on. Before deciding on an evening chill many a good dame will now consult the doctor's bill of fares and choose instead a morning headache. Father, too, will think twice before eating more of that delicious cherry pie and cream at the supper table, with a long three-dollar night ahead of him.

Perhaps our usual sequence of meals ought to be reversed, so that the heaviest one would arrive in the sunrise hours. Thus, how greatly would each fond mamma prefer to send her ominously distended youngster off to school—serene in the knowledge that if the worst were to come it would at least happen while doctors were cheap and plentiful—than to sit up waiting for the refectory returns, while the family physician's turnip ticks off the dollars!

Then, too, the birth-control propaganda would gain many adherents by this measure, it being a matter of general knowledge that babies always set their little hearts, if not stomachs, on being vocally ill during the wee, small and expensive hours of the early morning. The only hopeful feature about this increase of fee is that it will affect the wealthy rather than the poor, as the latter can seldom afford to be sick anyway. Fashionable appendicitis victims may still continue to be taken after dark, while to those who are not engaged in the munition trade such a midnight operation would seem to be the most unkindest cut of all.—Public Ledger, Philadelphia.

A NURSE I KNOW.

She is large, kind and sweet.
Nothing small (except her feet) ;
"Bawn and bred" in Illinois brush—
She might listen, so let's hush.

A beautiful blue forget-me-not
Will fall to some young doctor's lot,
To care for, cherish and obey,
If Miss ——— has her way.

Swat the fly and then
Maintain a pile of garbage in the back yard?

REASONS WHY PHYSICIANS SHOULD PATRONIZE ADVERTISERS IN THEIR OWN STATE JOURNAL

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IDA:—We urge our readers to look carefully over the advertising pages, and let it be known we are in the profession and have needs to be filled.

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A:—Quite a good deal of our advertising is on mail, and unless our readers demonstrate their interest in it, we will lose it.

SAS:—Every advertiser in this Journal is paying a price for the privilege of telling you about the things he has to sell.

TUCKY:—You may depend on our advertisements as a safe and sound business directory.

NE:—Look through the advertising pages each month. Place orders with these concerns. Specify the products on your prescription.

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Delaware State Medical Journal



The Official Organ of the Delaware State Medical Society, One of the Oldest Medical Societies in America. Published under the direction of a Board of Trustees appointed for that purpose

Vol. VIII

JULY, 1917

No. 7

Editorial Office, 907 Delaware Ave., Wilmington, where all communications pertaining to editorial matter should be sent.

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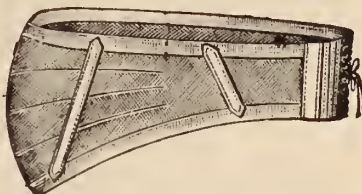
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Packages containing 4 sterile glass syringes of graduated strengths, \$5.00
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Syringe A	contains	0.0025	mg.	extract of the pollen proteins
" B	"	0.005	"	" " " " "
" C	"	0.01	"	" " " " "
" D	"	0.02	"	" " " " "

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Delaware State Medical Journal

Official Organ of the

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Editor

DR. W. EDWIN BIRD

907 Delaware Ave.

Wilmington, Del.

Business Manager

DR. J. W. BASTIAN

915 Washington Street

Wilmington, Del.

Assistant Editor

DR. T. H. DAVIES,

Marshallton, Del.

Board of Trustees

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WAR AND MEDICINE.—The Government is uttering, more and more urgently, pleas for more medical men. This appeal is a general one, no special branch of service being specified, since all of them are woefully short of medical officers. Let us examine briefly the needs of each department.

In the regular army, there will be 290,000 men, who will need 2,050 medical officers. At present there are only 550, leaving 1,500 vacancies for men, especially young men between 21 and 34 years of age, who wish to make the army a permanent career. Promotion will be rapid, and the service offers most unusual opportunities for the ambitious.

In the first quota of the drafted army there will be 700,000 men, who will need 4,900 medical officers, chiefly to examine recruits, give prophylaxis against typhoid and smallpox, and supervise camp sanitation, and later, probably accompany the troops to the front. These officers will be, at first, lieutenants in the Medical Reserve, and will serve only for the duration of the war. For each increment, or draft of 500,000 men, there will be urgent need for another 3,500 medical officers, so that if, as planned, an army of 2,000,000 men is ultimately to be formed, 20,000 medical men must be had. This is what worries the Government, as only 3,000 commissions for the Medical Reserve have been accepted. Where are the other 18,000? Men between 21 and 55 years

of age, professionally and physically acceptable should volunteer at once.

The National Guard will contain 433,800 men when its quota is full. These will require another 3,000 medical officers, many of whom have already been appointed, yet there are over 1,000 vacancies still to be filled in the various State militias. The requirements here are the same as for the drafted army, practically.

The Navy is to be recruited to a war strength of 250,000 men, requiring 1,500 medical officers, only 500 of whom are now in service, leaving nearly 1,000 vacancies in that service.

The Marine Corps is to be recruited to 30,000, with a proportionate medical staff. There are still some vacancies here open to those who prefer this branch of the service.

Finally, France needs most urgently 200 doctors a month. These will be appointed to the Medical Reserve of the U. S. Army, and assigned then to the French forces. For those seeking immediate service at the front, this is the quickest and surest route. There will be opportunity for a few men to enroll in some base hospital unit, of which 38 have now been organized.

We see, then, that the total immediate demand upon the American medical profession is for 20,000 medical officers. This means one-seventh of the 140,000 physicians in the country. Omitting the older men, who can perform greater service at home as administrators and teachers, and those of the younger men who are physically unsuitable, it is likely that one man in four, between 21 and 55, is needed at once. Delaware's share of the 20,000 needed now is 50 men, and so far, the Journal knows of barely 15 who have volunteered. Who will step up and fill in that yawning gap of 35? If you wish detailed information write to Surg.-Gen. W. C. Gorgas, of the Army, or Surg.-Gen. W. C. Braisted, of the Navy at Washington, or to Maj. E. H. Siter, M. R. C., 1818 S. Rittenhouse Square, Philadelphia, or to Capt. J. S. Davis, M. R. C., 1200 Cathedral Street, Baltimore, or to any of the following members of the Delaware State Committee of National Defense:

Draper, James A., chairman, 1015 Washington Street, Wilmington.

Beebe, James, Pres. State Medical Association, Lewes.

Forrest, George W. K., Sec. State Medical Association, 901 Jackson Street, Wilmington.

Briggs, Henry W., Sec.-Treas. Medical Council of Delaware, 1026 Jackson Street, Wilmington.

Frantz, A. E., Sec. and Executive Officer, State Board of Health, 504 Delaware Avenue, Wilmington.

Palmer, John, 1900 Delaware Avenue, Wilmington.

Springer, Harold L., 1013 Washington Street, Wilmington.

Stubbs, Henry J., 1204 Delaware Avenue, Wilmington.

Washburn, Victor D., 826 Washington Street, Wilmington.

A New Treatment For Status Epilepticus

By WM. HELD, M. D., Chicago, Ill.

He to whose lot it ever fell to attend a case of status epilepticus, will readily appreciate the feeling of misgiving which takes possession of the physician, as he approaches another such patient. The attack at first has the characteristic appearance of one of the many which the patient experienced in the past. The family, having exerted themselves by the employment of the usual measures which aim to protect the epileptic from injury, during convulsions, relieving of constriction by tight clothing and similar services, becomes alarmed at the fact that the patient does not regain consciousness after the attack but instead passes into another convulsive state. It is generally at this point that medical aid is summoned. The sad forboding of prolonged and repeated convulsions, without regaining consciousness during the convulsion-free interval, soon gives room to justified alarm. One seizure follows another until, after a variable period of time, the patient, under complete exhaustion and deep epileptic intoxication, breathes his last. Recovery from genuine status is extremely rare. This being the well known fact, I have often prepared the family to face the impending danger by stating this fact. Where so much is to be gained and little to be lost, any reasonable method of treatment should be given a fair trial. Arguing that the remedy which has proved beneficial in periodical epileptic seizures, should or might be of value in a siege of the same condition, I determined to put this reasoning to a practical test at the next opportunity. Within one year, I have treated six status cases by the method and with the results here described: Hot application to patient's feet, and cold to the head. Plenty of fresh air was admitted by opening of windows, during which time the body was protected against chills. Phlegm in patient's mouth was removed by the protected finger to

prevent forcible inspiration of particles during convulsions. A high rectal enema of two quarts of warm water was given. This aided bowel and kidney action and was sometimes enhanced by hot application to bladder and kidneys. All treatment was carried out regardless of convulsions, for which reason a good assistant was essential. One arm was bared, constricted above the elbow, and 10 or 20 cc. of blood withdrawn into a glass syringe. The larger quantity was obtained in cases with marked congestion of the head. The blood was placed in test tubes and for a few minutes cooled by holding same under stream of running water or, placing on ice where such was obtainable. The blood was then centrifuged, and 2 cc. of the serum drawn off. This was placed into a sterile vial, and 2 cc. of sterile physiological salt solution added. After thoroughly shaking this solution, one-half of the same was poured out, that is 2 cc. thrown away. To the remaining 2 cc. of solution another 2 cc. of the salt solution was again added and the process of shaking and discarding of one-half of the quantity, repeated until fifteen solutions had been prepared. To the last solution of 4 cc., I added 2 drops of dissimilar anti-epileptic serum, and of this solution 5 drops were injected intravenously into the epileptic, again utilizing a vein at the elbow. The serum was obtained from any epileptic just then under treatment, and is the same which I have used in all cases of epilepsy. My reasons for using this anti-epileptic serum are based upon the fact that epileptics have promptly responded to such injections by registering reactive attacks, thereby proving the homogenous character of the injected and the disturbing elements present in the system. Moreover, it is known that injections of nerve substance and of pituitary substance, lessens blood pressure, which again reminds of the Wentzel theory (1806) which held that epilepsy is caused by accumulation of colloids in this gland, so that the employment of my anti-epileptic serum, which contains these elements, seems very justified. The results in the four successful cases consisted in a gradual diminution of convulsive intensity. No other convulsion followed the injection.

The patients became quiet, slept on, and behaved as after ordinary attacks of epilepsy. Two of the patients experienced a delay of five and five and one-half weeks respectively, in the recurrence of their next attack, following recovery from status. This may have been due to the introduced anti-epileptic ferment or to protective ferments liberated during the siege. Two of the six patients died in status without any noticeable change despite the treatment, but in one of the fatal cases the anti-epileptic serum addition was not made, it not being on hand in time. The results

obtained and the usual gravity of status in mind, warrant the earnest consideration of the suggestion here made.

The serum treatment being intravenously should be administered by one experienced in specific serum therapy, or at any rate by one very observant as to asepsis.

The New York Convention

By WILLARD SPRINGER, M. D., Wilmington,

Delegate from the Medical Society of Delaware.

As the delegate from the Delaware State Medical Society, I attended the meetings of the House of Delegates at the meeting of the A. M. A., in New York City, June 4 to 8, 1917. The meeting of the House of Delegates was held in a room of the building of the New York Academy of Medicine. I attended all the services of the House of Delegates and found them very interesting. The business that was done you will find in the reports in the Journal of the A. M. A.

The general meeting of the A. M. A. was most interesting and instructive. The address of Dr. C. H. Mayo was heard with great pleasure, and those who have not read it will will derive both pleasure and profit from so doing

In place of the usual reception given to the president of the association, a patriotic meeting was held in the Hippodrome, which was a most inspiring and instructive affair, as you will readily agree when you have noted the eminent speakers who were present.

Dr. Alex. Lambert, president of the New York State Society, presided. Mayor Mitchell, of New York, made the address of welcome. Collector of the Port of New York, Dudley Field Malone made an address, also Dr. Vincent, president of the Rockefeller Foundation.

Colonel Roosevelt made the last speech, which was received with great applause.

Sousa's Band was there and also Mme. Alda, who sang the national songs of England, France and America, dressed in the colors of the nations.

Miscellaneous

The annual report of the Delaware Hospital has just reached the Journal. We quote the following from the remarks of Mr. Thos. F. Bayard, president of the Board of Trustees:

The report shows an increase of over 11,000 total day's service, both free and pay, an increase of over 40% for the past year. The number of ambulance and patrol cases was 1441, an increase of 37%. The number of persons admitted during the past year was 2459, an increase of over 26%. In the Pathological laboratory, 5524 examinations were made, a decrease as against the preceding year. It would appear that in this department alone the work of those having it in charge was lighter than in any department of the hospital.

In the X-ray Department, there were 678 examinations made during the past year, an increase of over 60%, and as further showing the extended work of this department, the number of plates necessary to be used was 1014, being 60% more in number than those required for the previous year.

While we have no figures to make a definite comparison as to the work in our new Maternity Wards, it is gratifying to note that the number of free and pay maternity cases treated last year shows an increase of over 100%. The number of operations performed during the year was 905, an increase of 16%.

Tremendous good is accomplished in all hospitals by the dispensary visits, and it is very gratifying to note our work in that regard during the past year. The report shows that these visits number 9974, an increase of over 26%.

From the Levy Court and the City Council of Wilmington, we have again received the same amounts as in the past few years for which we express our appreciation and thanks. In relation to the amount received from the City Council, it is gratifying to note that for the amount paid us, \$2,000.00 we furnished free to the citizens of Wilmington alone, 7835 day's service. While the furnishing of this number of day's service was to us a pleasure and privilege, it was very costly, amounting to something over \$14,000.00, and we justly feel that we can and will appear before the Finance Committee of the City Council in the near future asking them to increase their appropriation for the services we render.

The returns made by all the hospitals in the city for similar services show that while we receive two-fifths of the

entire appropriation for hospital service paid by the city for free day's service, over 56% thereof is furnished by our hospital, so that our proposed request for an increased appropriation will be manifestly based upon sound facts.

The Treasurer's report shows a total of all expenses in the administration of the hospital covering all departments of \$75,828.87, an increase of \$21,318.94, but with this increase in expense, it is a matter of regret that our income still lags behind, and we come over with a deficit for the current year of \$4547.74.

A summary of the cases treated in 1916 is as follows:

ADMITTED, 1916.

	Men	Women	Children	Totals
City pay	332	379	142	853
Outside pay	253	152	56	461
				1314
	Men	Women	Children	Totals
City free	378	199	174	751
Outside free	263	87	44	394
				1145
				2459
Total number of pay days service				15,477
Total number of free days service				22,955
Total days service				38,432

RESULTS.

Recovered	1,929
Improved	255
Unimproved	67
Died	208
	2,459
Died within 48 hours of admission	71
Remaining in hospital on Jan. 1st, 1917	119

DIVISION OF CASES

General Surgical	901
Appendiceal	130
General Medical	658
Typhoid Cases	94
Gynaecological Cases	220
Nose and Throat	217
Eye and Ear	44
Maternity Cases	195
	2,459

OPERATIONS.

General Surgical	395
Appendectomies	121
Gynaecological	161
Nose and Throat	191
Eye and Ear	31
Maternity	6

 905

Number of Dispensary Visits 9,974

Number of Ambulance and Patrol Cases.... 1,441

During 1916 examinations were made in the Pathological Laboratory as follows:

Routine Urine Examinations	4,680
Estimation of Sugar in Urine.....	32
Hemaglobin Estimations	30
Red Blood Cell Count.....	30
White Blood Cell Count	300
Differential Blood Count	80
Pus and Discharges	50
Sputum	95
Tissue Sections	35
Stomach Analysis	9
Stool	7
Post Mortems	24
Vaginal Smears	15
Eye Smears	12
Widals	70
Spinal Fluids	15
Wasserman's Tests	40

 Totals 5,524

Roentgen Ray Laboratory reports the following:

During 1916 there were 687 examinations made.

1014 Plates were used.

The whole report makes a most commendable showing.

THE FUTURE OF HOMEOPATHY.

Dr. A. W. McDonough, of What Cheer, Iowa, in a paper before the Hahnemann Medical Association of Iowa, and published in the Iowa Homeopathic Journal, takes a rather pessimistic view of the future of homeopathy. Dr. McDonough states that "not many years ago we had twenty-one homeopathic colleges in the United States, each college full of students. Today we have nine homeopathic medical schools in the United States, and very few students." The doctor recommends that the homeopathic medical profes-

sion should be more active in encouraging students to take homeopathic medicine, and states that if the 350 homeopaths in the State would each "send one student to our college every two years we would enroll 175 students per year instead of four or five," and "if each one would send one student to our college every four years we would enroll 87 students," etc. We are not prepared to say whether this increased activity on the part of the homeopaths would increase the number of students attending our homeopathic medical schools or not, but we apprehend that this is not the real cause of the decline of homeopathy.

We are free to admit that homeopathy has contributed in certain ways to bring about a wholesome change in the practice of medicine, but now the demand is for scientific practitioners who will be able to exert an influence in health and sanitation, and will base their diagnosis on scientific methods of inquiry. Homeopathy certainly could not go on with the methods of instruction employed in their institutions. It did not fulfill the requirements of the present advanced state of scientific medical practice. There are, no doubt, some useful things in homeopathic therapy, and certainly we have no controversy with any one who prefers the homeopathic method of prescribing medicines. In our own state we believe it to be the true policy of the homeopaths to educate their students side by side with students that are working in scientific lines, and that the application of homeopathy in the medical school should be limited to two chairs, the chair of therapeutics and the chair of practice; that in all other respects the student should pursue the same course of study that all other medical students pursue. If homeopaths insist on a special and distinct system and endeavor to maintain courses of instruction as a separate organization they are sure to fail. The class of young men who enter upon the practice of medicine at the present day must meet the requirements of scientific medicine in all its departments and when students are invited to accept courses of instruction in the very limited field of homeopathy, they will not be students who can compete in the field of medicine today; and when we place the attendance of the medical department in parallel columns with the department of homeopathy, the student and the general public will come to realize the weakness of homeopathy.

If all the students are classified as students of medicine, and a certain number of them choose at the proper time in their course to take up homeopathic therapeutics and practice, we need not so fully advertise to the public the low state to which homeopathy has fallen.

In an editorial not more than a year ago we urged that

in the interest of homeopathy, that this change be made, and that students be permitted to elect what course of practice they will adopt, and if to the mind of the scientifically trained young man, homeopathic therapeutics possessed certain attractions and perhaps advantages over any other system of therapeutics, then we will elect that system.

If the future is to be measured by the past, in a few years no students will be found in the homeopathic departments of state universities. Therefore, moved by a spirit of friendliness to homeopathic medicine, we urge that the friends of homeopathy cease to urge the continuance of a separate and distinct department of homeopathy except so far as certain chairs are concerned.—Exchange.

CONFESSIONS OF A CHIROPRACTOR.

An article inserted as an advertisement in the Ogden (Utah) Examiner, October 1, 1916, and evidently intended as an argument in favor of chiropractic, contains some statements which show how little use "healers" of that brand have for education. What is the use of preliminary education, anyhow? Note the following:

"Education which has no relation to the theme or subject under consideration becomes burdensome and therefore detrimental."

Greek and Latin, for example are "both dead tongues and, outside of those engaged in translating manuscripts, are used only to display pedantry; they are of no value to chiropractors."

They, of course, could never see the use of a medical education.

Note this, ye shades of Pasteur, Koch, Obermeier, and others!

"They would compel us to study bacteriology. This is of no value to the chiropractor. It is not worth while to spend time, energy and money to microscopically examine infinitesimal mites or to group and classify them."

Of course, there is no such thing as blood poisoning, or infections; diphtheria and its cure with antitoxin are fabrications from some overworked anemic intellect, and even if there are contagious diseases, smallpox, spinal meningitis, infantile paralysis or the like, all, forsooth, may be cured by the magic touch of the chiropractor applied to the patient's spine. Why bother one's head regarding microbes?

As to materia medica, oh, horrors!

"We would also be required to learn "materia medica." What on earth would we do with that ponderous knowledge, we who abhor the very name of drugs and repudiate their use?"

Even chemistry is tabooed.

"There is also chemistry, which has nothing in common with chiropractic and cannot be made an adjunct to it."

Evidently education generally has "nothing in common with chiropractic" or, for that matter, chiropractic has nothing in common with education, since

"Greek, Latin, bacteriology, chemistry and materia medica would be of no more use (to chiropractors?) than a whipsocket would be in an automobile or a smokestack to an aeroplane."

Yes, what on earth is the use of spending four years in high school, two years in college, four years in a medical school and a year or more as an intern in a hospital and getting all that "burdensome and detrimental" knowledge when you can become a full-fledged chiropractor for only three months or possibly less of corresponding study?

All of this reminds one of the old adage that "A wise man knows a fool because he has once been foolish, but a fool cannot know a wise man because he has never been wise."—Monthly Bul. Fed. State Bds. of Med. Ex.

DO YOU KNOW THAT

It is dangerous to put anything into the mouth except food and drink?

Sanitary instruction is even more important than sanitary legislation?

The U. S. Public Health Service issues free bulletins on tuberculosis?

The continuous liberal use of alcoholic beverages lowers efficiency and menaces longevity?

Moderate exercise in the open air prolongs life?

"Mouth breathing" makes children stupid?

Fish cannot live in foul water nor man in foul air?

Smallpox is wholly preventable?

WORKED ALL HIS LIFE.

A woman was testifying in behalf of her son, and swore that he had "worked on a farm ever since he was born."

The lawyer who cross-examined her said: "You assert that your son has worked on a farm ever since he was born?"

"I do."

"What did he do the first year?"

"He milked."—Memphis Druggist.

Go to the drug store to buy a tooth brush and then Handle the entire stock to see if the bristles are right?

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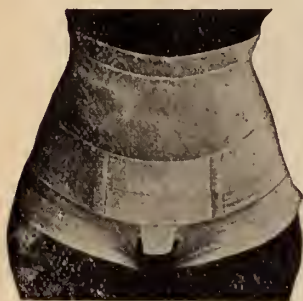
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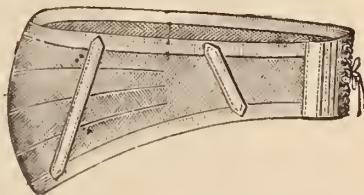
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Editor

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907 Delaware Ave.

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Business Manager

DR. J. W. BASTIAN

915 Washington Street

Wilmington, Del.

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TEETHING AS A CAUSE OF DISEASE.—What mother does not regard the first “teething” as a period fraught with grave possibilities, and how many physicians still cling to the notion that dentition is often responsible for a variety of pathologic conditions in the infant? The dread dates back to the time of Hyppocrates, who attributed most of the diseases of infants during the period of dentition to faulty eruption of the teeth. Later, Celsus, Aetius, Rhazes, Ortlob, Boerhave, Pelargus, Pfaff, Hunter, Glisson and others regarded the first dentition as the possible cause of diphtheria, stomatitis, abscesses, otitis, diarrhea, convulsions, chorea, epilepsy, enuresis, paralysis, gangrene, various skin eruptions and a number of minor ailments. In 1845 Hanman included in the above list nystagmus, scabies, tinea capitis, croup, cholera, vaginal discharges and priapism. Vogel, a well known professor of pediatrics, as late as 1871, expressed similar views on the pathology of dentition. The protest against such views, first expressed by Wichmann in 1797, were later taken by Kassowitz. The latter made a careful study of forty thousand infants, including his own, and showed conclusively that dentition is a physiologic process and can in no way be held as the cause of conditions which may and often do occur during this period. A. O. Karnitsky (*Roussky Vrach*, October 8-15-1916) observed during the last thirty years over one hundred thousand infants, half of

that number during the period of first dentition. In many instances careful clinical observations were made by the most exact clinical methods to determine if there is any relation between a co-existing disease and the eruption of the teeth. In others a careful record was kept of the development of the child during dentition. In no instance was there the slightest suggestion that dentition could have any possible relation to existing pathologic conditions; nor could he find any substantiation of the more recent view expressed by Heubner that while dentition does not cause disease directly, it weakens the organism by making new demands on the system. The author's reasoning and deductions from a vast amount of clinical material are applicable not alone to dentition, but other physiologic processes to which various pathologic manifestations have been erroneously attributed, as puberty, menstruation and menopause. It is not that the process itself is the cause of disease but an existing abnormal condition renders the given process abnormal. A physiologic process is essentially painless and free from any systemic disturbances. When it ceases to be so it is no longer physiologic, the perversion having been brought about by pathologic changes in the organ or organs concerned, or by reflex action.

A. R.

Caeserean Section

By CHAS. F. DAVIDSON, M. D., Easton, Md.

Caesarean section is such an easy operation and so much time is saved by doing it, that I fear the operation is likely to be abused. In some cases no problem in surgery is more difficult to solve, and the judgment of a conscientious man is taxed to the utmost.

When the true conjugate is 7.5 C. M. or less we know that a full term child cannot be delivered alive by the normal route, and if the child is living the only course to pursue is a Caesarean section; if the true conjugate is over 7.5 the woman should have a chance to deliver herself by the natural route. If after a reasonable time of true labor pains the presenting part does not engage or descend, Caesarean section is indicated, provided the true conjugate is 9 C. M. or under; if over 9 C. M. I. P. version or forceps should be attempted.

Next to pelvic deformities we will consider pelvic ob-

structions: An insuperable object in the pelvis is an indication for Caesarean section.

Eclampsia: If the patient is a multipara and the os will admit one finger, Caesarean section should never be performed, but I. P. V. On the other hand if the woman is a primipara with an undilated rigid os, the child should be delivered by Caesarean section, as soon after the first convulsion as it is possible to get her on the operating table. While I appreciate that the etiology of eclampsia is obscure and that some cases continue to have convulsions and die after the child is taken away, this is not my experience, as I have never lost a child or mother when Caesarean section was performed for eclampsia. In one case the convulsions continued after the removal of the child, but they got less severe and wider apart until they ceased. Whatever may be the cause of eclampsia, we know that the pregnant uterus is the cause of the cause, and it seems common sense to relieve the woman of the cause of the cause as soon as possible.

Placenta Previa: Caesarean section is justifiable under exactly the same conditions that control its employment in eclampsia, i. e. in a multipara where the os will admit one finger never do it, but an I. P. V. instead; in a primipara with an undilated rigid os, always do it.

Unusual Presentations: I mean by this term posterior occiputs that will not rotate, and transverse presentations, for which conditions rarely if ever should Caesarean section be done. I have never seen a case where I thought it justifiable, Boyd, of Philadelphia, claims that once a Caesarean always a Caesarean, on account of the danger of the scar rupturing in subsequent labor. I have seen but two ruptured uteri, both in multiparae, each had several children with normal labors, and neither had been subject to Caesarean section, and on the other hand I know where the second child was delivered by forceps of a woman 35 months after Caesarean section had been performed for eclampsia, and now 9 months after the forceps have been applied or membranes ruptured, unless you remove the body of the uterus.

To recapitulate: The rarest of all rare things in a multipara is where conditions justify Caesarean section.

In a primipara, a true conjugate of 7.5 C. M. or a plevic obstruction, Caesarean always.

In a primipara with a hard, undilated os suffering with placenta previa or eclampsia, unhesitatingly do Caesarean section. Under these conditions no man who really realizes his responsibility ever undertook to deliver by the natural route without feeling that there should be some better way. By the vaginal route the child is usually lost and nearly always the woman is terribly torn, sometimes all the way

through the sphincter ani. What an awful picture; besides, the danger of sepsis in these cases is always great, the parts so bruised and lacerated that the stitches do not hold, and after your patient gets about again the same old set of symptoms we are all so familiar with that follow difficult labors ensues, and many women are rendered invalids the balance of their lives by a rapid delivery (necessary for their life) under these conditions. Hundreds of operations are necessary every year, the direct result of these difficult deliveries by the vaginal route; lacerated cervixes, uterine carcinomas, cystoceles, rectoceles, and lacerated perineui. Caesarean section on the other hand offers a dangerous operation to be sure, but in my judgment not near so dangerous as an I. P. V. or high forceps through an undilated os of a primipara, and when the mother gets about again she is just the same she was before she was pregnant, not a muscle torn, not an organ out of place, only a long pin scratch on the abdominal wall to remind here that she has never known what expulsive labor pains are.

*Read before the Kent County Medical Society at Harrington, Del., July 18th, 1917.

Therapeutic Leucocytosis

By ALBERT ROBIN, M. D., Wilmington.

From the time the late Metchnikoff enunciated his doctrine of phagocytosis as an important factor in immunity, the profession has been searching for remedies which would increase the number of the white defenders in the blood. Metchnikoff's original theory, however, was faulty in a great many essential points, chief of them being that it failed to explain how the organism defends itself against bacterial toxins and toxic proteids not subject to phagocytosis. Moreover, it is not the simple process of ingestion that it was at first conceived to be. Subsequent investigations made it evident that something must happen to the microorganism before it can be ingested by the leukocyte. The preparation or "fixing" was attributed to a substance formed in the blood serum as a result of the reaction against the invading microorganism, and variously designated as "immunebody," "intermediary body," "desmon," "fixative," "opsonin," etc. Once fixed, the foreign body is subject to digestion by the ferment-like substance present in the leukocyte, the "citase," "alex-

in," "complement," "addiment," or by whatever other name it may be designated.

As stated before, the beautiful theory elaborated by Metchnikoff, beautiful because of its very simplicity, was soon found to be inadequate as an explanation of all of the complex processes of immunity. As pointed out by Ehrlich and his followers, the theory of phagocytosis could not explain immunity against toxins, toxic proteids or hemolysis, in which phagocytosis does not take place. The German school, then, advanced what may be called the "humoral theory," according to which the various principles and substances concerned in the process of immunity are present in the blood serum, and are derived from various sources, so far unknown.

At one time the differences between the "humoral theory" of the German school and the "cellular theory" of the French were irreconcilable, and the antagonism between the advocates keen and at times marked by intolerance. But as investigation followed investigation and new facts were brought to light, the contentions gradually disappeared and a sort of an amalgamation of both theories resulted. The prevailing conception at present is that in the majority of instances phagocytosis is the important factor in the production of immunity, while in certain cases the leukocytes are not apparently concerned in the process.

Be it as it may, clinical evidence points very strongly to the important role played by the leukocytes in acute infections. The hyperleukocytosis which takes place in most of the acute infections, the migration of leukocytes to areas of inflammation, and, finally, the presence of bacteria within the cells of leukocytes, as in gonorrhea and streptococcic infections, all these phenomena indicate unmistakably that the leukocytes are the forces which nature marshalls in defence against a foreign irritant. This being the case, it is reasonable to suppose that an attempt to increase the leukocytes in the blood through the administration of drugs is rational therapy. Acting on this supposition, clinicians have employed from time to time various medicinal agents which have been shown to possess the power to augment the number of leukocytes in the blood. The results, however, have been disappointing. It is quite evident that the mere presence of even a large number of leukocytes in the peripheral blood is not sufficient to establish immunity. It is noteworthy that in pneumonia, for instance, resolution takes place not when the hyperleukocytosis is at its height but when the leukocytes are broken down. The same may be said of abscess formation. The inflammation remains acute despite the presence of a large number of leukocytes within the in-

flammatory zone, but as soon as these leukocytes begin to break down, the inflammatory process subsides, the offending bacteria are rapidly destroyed, and the pus soon becomes sterile. Evidently our forefathers were not so far wrong when they regarded the formation of pus as a favorable termination of inflammation. The doctrine of "laudable pus" is not as ridiculous as we have been lead to think it is, and there is ample scientific justification for the deductions made by our shrewd forebears. As early as 1892, Dr. Botkin, then a young Russian physician, working in Koch's laboratory, showed that immunity does not take place until the leukocytes undergo fisintegration, and he regarded leukocytolysis as a *sine qua non* in the defence against infection. More recent observations by Manuchin, (*Roussky Vrach*, May 28, 1916), showed that leukocytolysis is brought about by ferments—leukocytolysins—circulating freely in the blood. Excessive leukocytolysis is inhibited by another group of ferments—antileukocytolysins. The leukocytolysins originate, according to the author, in the spleen; antileukocytolysins, in the liver. This fact he established not only by experiments with extracts from the spleen and liver, but by subjecting these organs to the influence of the X-ray. By a careful developed technic, he applied the rays to the spleen of animals and men, and produced leukocytolysis. Raying of the liver, on the other hand, brought about antileukocytolysis. The further fact was established that the blood-serum after roentgenization of the spleen contained twice as much alexins, due to the disintegration of the leukocytes. The theory of immunity constructed by Manuchin as a result of his numerous experiments, is as follows: The infective agent invades the spleen and stimulates the production of leukocytolysins; these, in turn, stimulate the bone marrow to a greater outpour of leukocytes; the leukocytolysins disintegrate the leukocytes, liberating the immune-bodies and alexins with which the latter are combined. At the same time the leukocytolysins stimulate the liver to the production of antileukocytolysins, inducing indirectly a secondary leukocytosis. The leukocytes are further attacked by the leukocytolysins, and the disintegration of the latter leads finally to victory. Should the antileukocytolysins appear in excessive amounts, leukocytolysis may become inhibited and anaphylaxis induced. The correctness of this theory is really not of as much interest as the fact that by applying the X-ray to the spleen of monkeys and guinea pigs infected with virulent tubercle bacilli, the author was able to materially inhibit the progress of the disease in some and check it altogether in others. Dr. Manuchin states that he has applied the method in the treatment of tuberculosis in men, but

does not give the results. If the latter should prove as favorable as those obtained in the experiments on animals, a most valuable method of treating tuberculosis and other infections has been discovered.

Miscellaneous

A new and complete clinical laboratory has been installed in the Delaware Hospital. The following is the schedule of prices for patients not inmates of the hospital:

Urinalysis, single specimen	\$1.00
Urinalysis, A. M. and P. M. specimens.....	2.00
Urinalysis, 24 hour, including quantitative urea estimation, quantitative albumen and glucose.....	3.00
Full examination of gastric contents, including microscopic, and pepsin digestion	3.00
Full faeces examination	2.00
Sputum examination	1.00
Complete blood, including differential count.....	3.00
Blood examination, without differential	1.50
Wasserman reaction	5.00
Pus smears	1.00
Pus Cultures	3.00
Autogenous Vaccines	5.00
Widal reaction	1.00
Blood Culture	5.00
Examination of Spinal Fluid	3.00
Examination of Spinal Fluid, including Cultures.....	5.00
Examination of Pathological Tissues	5.00

Dr. J. S. Keyser, who has been the pathologist for the past three years, has just resigned from that position. His successor has not yet been named.

KENT COUNTY MEDICAL NEWS

Dr. "Wid" Marshall, of Milford, has been appointed major-surgeon in command of the medical corps First Delaware Infantry. We shall all miss Dr. Marshall in the society, for he was one of our very active members.

Dr. Joseph Bringhurst, of Harrington, has been commissioned a first lieutenant in the Medical Officers Reserve Corps.

Dr. James H. Wilson, who has been very ill for some time, is very much improved and able to get out once more.

Dr. James Lofland of Milford has been ordered to report for examination in the Medical Reserve Corps, N. T. A.

Dr. Luther Conwell, of Camden, is now fully installed as a member of the State Board of Health.

The Kent County Society is wide awake—more awake than it has been in years. Our monthly meetings are well attended and the interest in papers, etc., is very enthusiastic. The society is proving a help to many of the Kent county physicians.

Dr. James Behen, of Dover, has graduated from the Medico-Chi. College, Philadelphia, and has received an appointment at St. Joseph's Hospital, Philadelphia, as interne.

Joseph McDaniel, of Dover, is now a senior at "Jeff" and hopes to return home permanently next year.

There are now five members of the Kappa Psi Medical College Fraternity located in Kent county.

A DAY WITH THE VISITING NURSE STAFF.

NURSE A.—8.30 A. M.

Call 1. Child with inflammation of the eye. Irrigation of eyes. Washing and cleansing of mouth.

Call 2. Reporting at the V. N. Asso. for new calls and reporting previous day's work.

Call 3. Maternity. Bath, temperature, pulse and respiration; making of bed; special treatment.

Call 4. Bright's Disease. Temperature, pulse and respiration, bath, alcohol rub, making of bed.

Call 5. Pre-natal. Instruction (personal) and arrangements for time of confinement.

Call 6. Maternity. Temperature, pulse and respiration, bath, toilet arrangements; special treatment, bed made. Child bathed, eyes and mouth washed with special preparation; special dressing applied.

Call 7. Typhoid. Sponging, temperature, pulse and respiration.

Call 8. Pneumonia. Temperature, pulse and respiration, making of bed, bath, alcohol rub, diet instruction of ventilation.

Call 9. Telephone Visiting N. A. for afternoon instructions.

Call 10. Call up Hospital to find out if school child has arrived for operation.

Call 11. Call school to get teacher to put drops in child's eyes for next day's examination.

Call 12. Telephone doctor, arrange for operation on child's throat.

DAILY REPORT OF WORK DONE.

Write up individual history cards for V. N. A. and Metropolitan Life Insurance Company.

Telephone physician, special symptoms of cases.

NURSE B.—8.30 A. M.

Call 1. Senile debility. Bath, alcohol rub, lifting of patient from bed to cot, arranging air cushions.

Call 2. Reporting at V. N. A. headquarters for day's program.

Call 3. Pneumonia. Temperature, pulse and respiration, bath, alcohol rub, special application over chest. Telephone report to physician of symptoms needing immediate attention.

Call 4. Child with Bronchitis. Temperature, pulse and respiration, bath, application of the chest; instruction to mother about feeding, ventilation and clothing.

Call 5. (Woman needing special treatment).

Call 6. (Woman needing special treatment).

Call 7. Pneumonia. Temperature, pulse and respiration, bath, alcohol rub, special treatment. Bed made.

Call 8. Convalescent. Instructive visit.

Call 9. Convalescent. Instructive visit. Case of boy at place of employment.

Call 10. Phone V. N. Asso. for afternoon calls.

Call 11. Make arrangements for boarding and care of baby while mother goes to hospital.

Call 12. Report case for relief to Associated Charities.

Call 13. Report condition of case to physician.

Call 14. Telephone relative to stay with sick woman.

Call 15. Write up individual history cards.

Call 16. Write up daily report sheet.

NURSE C.—8.30 A. M.

Call 1. Reporting to V. N. Asso. for day's orders.

Call 2. Grippe. Temperature, pulse and respiration, bath, alcohol rub.

Call 3. Maternity. Temperature, pulse and respiration, bath, alcohol rub, special treatment.

Call 4. Senility and cancer. Temperature, pulse and respiration, bath, alcohol rub, bed linen changed, personal linen changed (lifting very difficult).

Call 5. Lumbago. Special treatment. Applications; assistance in making toilet.

Call 6. Burns. Dressing of wound.

Call 7. General neuritis. Bath ointment to hips and shoulders, changing of clothing, making of bed, patient lifted out in chair.

Call 8. Cancer of breast. Bath, clothing changed, wound dressed.

Call 9. Telephone V. N. Asso. for afternoon orders.

Call 10. Otorrhoea. Special treatment to ear.

Call 11. Telephone physician regarding case.

Call 12. Write up individual history, V. N. A. and Metropolitan Life Insurance Co. and report (daily) of visits made and expenses.

NURSE D.—8.30 A. M.

Call 1. Metropolitan Life Insurance office for industrial life insurance nursing calls.

Call 2. Reporting at V. N. Asso. for day's orders.

Call 3. Cancerous tumor. Dressing of wound.

Call 4. Maternity. Bath, toilet arrangement, bed made, special treatment. Baby bathed, dressed, special treatments and dressings.

Call 5. Eczema and Conjunctivitis. Ear dressing; eye lotion applied.

Call 6. Telephone V. N. Asso. for afternoon cases.

Call 7. Pre-natal. Instructive.

Call 8. Quinsy. Instructive.

Call 9. Malaria. Temperature, pulse and respiration. Instruction for family nursing.

Call 10. Uremia. Temperature, pulse and respiration. Bed made, back treated, instruction for family care.

Call 11. Arrangements to meet photographer and take picture of patient's surroundings.

Call 12. Call physician. Report special symptoms. Ask for special nursing directions.

Call 13. Write up individual history cards, Metropolitan Life Insurance Co. and V. N. Asso. Write daily report slip of work done and expenses connected with calls made.

NURSE E.—8.30 A. M.

Report at V. N. A. Record new cases; register Metropolitan Life Insurance cases; receive reports of nurses work of previous day. File records.

Physical examination of school children.

Distribution of telephoned new cases for afternoon visits.

Ordering drugs for V. N. Asso. and Italian Neighborhood House.

Call up physicians and report special cases, arrange for operations and special treatments of school children.

Call up hospitals, arrange for bed for patients and apply for vacancies for operations of adenoids and tonsils.

Call up State T. B. Dispensary and refer case.

Write up Metropolitan Life Insurance Nursing reports and mail New York office.

Attend Associated Charities Case committee meeting.

Write up school children's physical examination.

Report to Probation Officer of J. C. the physical condition and medical advice regarding a referred case. Visited in his home the day previous, and examined in Dispensary.

Respectfully submitted.

MARIE T. LOCKWOOD, Supt.

GANGRENE SERUM FOUND

Dr. William H. Welch, of Johns Hopkins, discussing the discovery of an antitoxin for the deadly gangrene, or "gas bacillus" poisoning of the battle fields, by research workers at Rockefeller Institute, called it one of the most important advances in medical research as applied to war, having an even greater bearing on the treatment of war wounds than the Dakin-Carrel treatment of sluicing continuously.

"I reported the discovery to the National Council of Defense last week," said Dr. Welch. "Dr. Flexner was to have made the report to the council, but he was unable to do so, and I took his place.

"The serum works on exactly the same principle as the anti-tetanus serum—by prevention. The anti-tetanus serum is injected into a patient to prevent the development of lock-jaw. The gangrene antitoxin is injected to prevent the development of the gangrene poisoning.

NOT TRIED YET ON HUMANS

"It was developed by Dr. Carroll Bull and Miss Ida W. Pritchett of the Rockefeller Institute, by immunizing horses by the application of the bacillus germs, then obtaining the resultant serum from the horses. It has been used on various animals with fine success, especially on rabbits, and while we have not yet tried it on humans we feel that the same result will be obtained as with the rabbits."

The next step has been taken already—that of preparing to turn out the serum in large quantities for use at the battlefronts, though it will be some time before it can be used on the battlefields extensively, as the process of obtaining the serum through the successive immunization of the horses is necessarily tedious.

WILL BE FIRST AID REMEDY

In effect, the new serum will displace the Dakin-Carrel method of treating wounds. It will be the chief first aid treatment of the battle lines, the chief stock of the first field hospital. As soon as a soldier is picked up wounded, he will

be given an injection of the serum and hustled to the rear ambulances, with no fear that the deadly gas infection will develop. It means cutting down the big death rate from infection. This gas bacillus was discovered, or isolated, by Dr. Welch himself 25 years ago. Medically, it has been given his name, being known as the bacilli welchii.

PRESENT IN THE SOIL

The bacillus is widely present in soil, and when carried to an open wound germinates quickly, developing bubbles of gaseous matter, whence comes the name "gas bacillus." The bubbles rapidly multiply, a few hours often being sufficient to cause death.

Possible gangrene poisoning is offset now by the Dankin-Carrel system of constantly flushing the open wounds, but patients are frequently too far off to be given the advantage of the flushing method, and this is where the serum will be chiefly valuable. The ambulance, or medical corps, will inject the serum into the wounded soldier even before they treat his wound with iodine.—Baltimore Sun.

HEALTH NEWS.

Who would have thought that the tin can is a menace to the public health? The expert malaria investigators of the U. S. Public Health Service have found, however, that discarded tin cans containing rain water are breeding places for the mosquito which is the sole agent in spreading malaria. A hole in the bottom of the empty can might have resulted in the saving of a human life. Certainly it would have assisted in preventing a debilitating illness. Empty tin cans have no business about the premises anyway, but if we must so decorate our back yards, let's see to it that the can has a hole in the bottom.

DO YOU KNOW THAT

Four per cent. of the inhabitants of certain sections of the South have malaria?

The United States Public Health Service has trapped 615,744 rodents in New Orleans in the past 18 months?

The careless sneezer is the great grip spreader?

Open air is the best spring tonic?

Typhoid fever is a disease peculiar to man?

Measles kills over 11,000 American children annually?

There has not been a single case of yellow fever in the United States since 1905?

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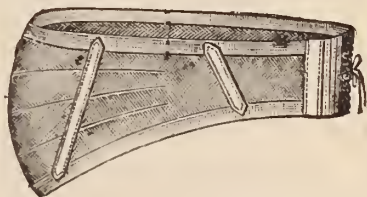
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Editor

DR. W. EDWIN BIRD

907 Delaware Ave.

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Business Manager

DR. J. W. BASTIAN

915 Washington Street

Wilmington, Del.

Assistant Editor

DR. T. H. DAVIES,

Marshallton, Del.

Board of Trustees

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A MEDICAL DRAFT—We have been listening to a great deal of speculation in the daily press as to the enlistment, training, and equipment of the new National Army, and no phase of this all-important matter interests the medical profession as profoundly as the medical service. The newspapers have, from time to time, cast more or less serious reflections against the doctors. Part of this talk undoubtedly has been due to the general hysteria that spread over the country immediately after the declaration of war; part of it has been due to the earnest and honest efforts of the War Department to secure in a minimum of time the maximum of physicians; part of it has been due to the efforts of some very prominent medical men to secure at once a surplus of doctors for the Army; part of it has probably been due to a pro-German propaganda which aims to dampen the enthusiasm of the people for this war by affecting the class of men in most intimate contact with the people, namely, the doctors.

We assume that all well-read doctors understand exactly what was referred to above, but to refresh the memory, let us reiterate that the press has stated that the doctors have been slow in offering their services to the Government; that the Army, and especially the new National Army, is woefully lacking in medical officers; and that to remedy the defect a draft of medical men was to be expected.

Now, what are the facts about the doctors? First, when

America went to war, the call from Europe was for more and more doctors, and be it said to the eternal credit of the medical profession, the doctors were the first to volunteer, were the first to go to Europe, and were the first to back up the Government in its efforts to raise a large army here for foreign service.

Second, the ratio of medical officers is seven to one thousand men, on the line, with an allowance of three for administration and staff work, a total of ten doctors to the thousand men. The first drafted Army is to number 650,000, which calls for 6,500 doctors; and while these are being trained the second draft of 650,000 will be enlisted, making a total of 13,000 doctors needed for the Army now or in the near future. Whether this Army of 1,300,000 men can be trained and sent to Europe before the war is over is a matter wholly of speculation, but it will do no harm to recall that the average transport carries only 1,600 officers and men, which means that about 1,000 boatloads will have to get over, to say nothing of the constant stream of supplies that will have to be sent after the men get there. This is merely a reminder of the prodigious task your Uncle Sam has picked out for himself, yet we confidently expect to see him put it across. But to return to the subject, 13,000 doctors are needed, and *we have them*. Early in August there had been a total of 16,000 applications, of which some 14,000 had been recommended for commissions, and of the remaining 2,000 some were pending and some had been rejected. Of the 14,000 recommended, there were 9,000 acceptances, leaving 5,000, of which 1,300 were pending in the War Department, several hundred more had been sent out too recently to permit of returns, and the balance had received their commissions but had not sent in their acceptances. How many of this 5,000 will ultimately accept their commissions time alone will tell, but we believe that not over 1,000 will decline or withdraw. This makes a total of 13,000 doctors who will respond to any call the Government may make upon them, and does not include the 100 new applicants who are coming in each day. It is apparent, then, that the medical men are being secured as rapidly as if not more rapidly than the remainder of the Army. If the war should last long enough to call out the second million men, more doctors would have to be had, but while speculation on this score is idle, we do not see how Germany can stand the coming winter, plus a concerted drive next spring and summer, despite the Russian dereliction, and hence we rather look for real peace talk in the autumn of 1918. The chances then are that enough medical men have been secured to assure the

proper medical officers for at least the first army of a million men.

Third, when it comes to the percentage of men from any walk of life who have volunteered for military service, the doctors easily lead. What other class of men has contributed approximately ten per cent of their numbers to the national service? And when we consider that the proportion of medical men within the military ages, 18 to 55, is perhaps two-thirds of the total (i. e. 100,000) we find that roughly 15 per cent of the doctors are in the Army, a record that invites comparisons.

Let any impartial person look at these facts and then say that a medical draft is needed! And if the doctors have come forward already in such a commendable percentage, is it fair to the profession to assume that a draft will have to be made to secure further medical officers? It is likely that no class of men who leave civil life to go into the Army have to make as many or as great sacrifices as do the doctors, and it is an insinuation emphatically to be resented that a draft should be made of those remaining. When the call comes plenty of additional medicos will volunteer. They have never been found wanting at any crisis in our history, nor will they fail in this one. And even after they join the Army they make sacrifices, sometimes uncalled for; and sometimes they are made the scape-goats for inefficiency in the regular staff:—witness the Chicamaugua affair in 1898 and the Mesopotamia affair in 1916. But with all these facts before them, the doctors still come forward. Only in case of colossal mismanagement that costs the lives of thousands of medical men do we see even the remote possibility, let alone the necessity, for a medical draft. We sincerely hope the lay press will stop publishing such hysterical and untimely aspersions against the medical profession.

Lest our remarks be misunderstood, we take occasion to urge all our eligible men to enter the Reserve, since a much better distribution can be made if the Government knows just on whom it can depend. This will allow the proper allotment of specialists to their respective fields, permit using teachers in their most advantageous positions, and give all others an opportunity to be placed where they will be most efficient. Much criticism has been heard because the War Department has placed men of widely different abilities on the same level, but such criticism is unjust, because only recently have enough men volunteered to make segregation and specialization possible. It is to be expected that such complaints will be unfounded in the future. In such a vast proposition as the present war, mistakes and a certain amount of muddling are to be expected, since history affords

no criteria by which to steer. We should all be tolerant and charitably disposed towards the Government, even though we think we see some flaws in methods and procedures. The fact remains that to make the very best selections for the various posts the Army must have a much greater number to choose from than are actually needed. We cannot speak too forcefully on this point, and we fully expect to see practically every eligible soon in the Reserve; but this need for a large excess of medical officers does not vitiate our previous remark—a medical draft is not needed, and the talk of one is an unwarranted reflection on the patriotism of the medical profession.

Medical Science in Its Relation to Crime

WILLIAM H. KRAEMER, M. D., Wilmington, Delaware

(Read at the Annual Congress of the American Prison Association, Buffalo, October 7-12, 1916.)

All who are interested in penal institutions and have studied the rapid progress made in the departments of psychology, sociology and in the education of the prisoner are fully entitled to know what progress has been made by the physician in the healing and caretaking of the prisoner.

I invite your attention, therefore, to this very important subject, limiting my paper to the studies and observations made at the New Castle County Workhouse in the State of Delaware.

Physicians who are interested in penal institutions, and who make a study of the prisoner, are led by these studies to certain definite conclusions. My observations have led me to believe that a person who is unable to live within the laws of human society, and who has been committed to a prison on two separate, distinct charges and at two different times, is suffering from some injury or disease, physical or mental, congenital or acquired, which is responsible for his abnormal conduct and behavior.

In a recent study of 1,821 prisoners, it was found that 68 per cent. were suffering from some malady, and that 78 per cent. of these were alcoholics. These figures are far from proving my conclusion, but they do show that if prisoners received adequate examinations a far greater per cent. would reveal physical and mental reasons for their delinquency.

These facts demonstrate the necessity of the physician maintaining an attitude of watchfulness for the appearance of some hidden malady from which the prisoner, unknowingly, may be suffering.

In no other field of medicine is it so essential for the physician to make his own deductions as to the exact nature of the malady from which prisoners are suffering. The prisoner may have some entirely different object in mind than health for placing himself under the care of the medical department. It is often for some privilege or personal advantage, as a change in diet or to gain a pardon or parole. On the other hand, time and again delinquents suffering from tuberculosis come to the prison charged with non-support.

In the study of cases already referred to, forty-seven prisoners charged with non-support revealed the following analyses: Two, tuberculosis; two, bronchitis; one, chronic gastritis; one, rheumatism; one, syphilis; one, epilepsy; one, insanity; three, chronic heart disease; two, hemorrhoids, and twenty-two, alcoholism. The remaining eleven were apparently in good health.

In these instances I deem it the duty of the medical officer to inform the proper authorities of the existing conditions, as it is certain that anyone suffering from the above maladies may be unable to provide for those dependent upon him.

It seems to me that this argument holds good in many cases of larceny, since through necessity, occasioned by disease or mental derangement, a person may commit theft.

I favor a most rigid examination of the prisoner when entering the institution, before he has the opportunity to contaminate the prison, should he be diseased. This course is followed in the State Prison of Delaware.

This prison system is a very complex one; prisoners are committed from one day up to life. This means a constant stream of prisoners coming and going every day of the year. Under these conditions it is extremely difficult to prevent infections being brought into the prison, and it is equally difficult to segregate those that are diseased and to successfully maintain standard sanitary conditions throughout the prison.

When, during the examinations, cases of infectious diseases are found they are given clothing so marked that it can be separated in the laundry. These prisoners are assigned to special cells where that particular disease is being treated and confined. Such is also the case in the dining-room. In other words, there is absolute segregation of the diseased individual, together with his clothing and personal belongings.

A very thorough examination should be made of the head, chest, abdomen and extremities.

As we know, poor eyesight or misfitting glasses are often responsible for headache, vertigo and nervousness; also chronic ear disease produces deafness, circulatory disturbances and abscesses in the brain; decayed teeth and diseased roots often produce neuralgia, gastritis, rheumatism and even Bright's disease; deviated septa, polypi and catarrh of the nose favor mouth-breathing, bronchitis and possibly tuberculosis; tumors in the brain or depressed fractures of the skull often produce epilepsy and insanity, while heart disease, aneurisms, tuberculosis, chronic gastritis and appendicitis are strong factors in reducing vitality and nutrition, thereby laying open the system to the ravages of disease.

Thus it is that syphilis and abnormal weaknesses of the nervous system, such as insane passion for alcohol and vice, find easy prey. The final result is an impairment of the faculties, which in turn reduces the power of the will and induces inability to longer cope with life's problems imposed by society. While the struggle for existence increases, the resistance against drink and temptation decreases, and so, step by step, misfortune through disease leads down the path that terminates at a prison door.

I am a strong advocate of preventative medicine. I believe that every prison should have a detention ward where prisoners can be held under observation for such a time as is necessary to determine the existence of any disease in the stage of its incubation.

Immunization against smallpox, typhoid and other preventable diseases is far past the experimental stage, and therefore it should be a part of the regular duty of the medical department to carry out this work to its highest degree. In so doing, these diseases in the prison will be reduced to the minimum and an invaluable service will be rendered to the community at large.

To prisons such as ours, that do not have a resident physician, I can recommend the Leutein test for syphilis in preference to the Wassermann and its modifications on account of the tedious technic and time required. This test has been very satisfactory in secondary and tertiary stages, but not in the primary stage of the disease.

The treatment in the absence of neosalvarsan has consisted of deep intra-muscular injections of mercury salicylate suspended in a steril paraffine oil, alternating from time to time with other salts of mercury.

Instead of potass. iodide we have been using comp. tr. iodine in a gelatin capsule internally.

For specific urethritis the serobacterins are giving sat-

isfactory results; and in tuberculosis, in addition to rest and supportive treatment, cacodylate of sodium hypodermatically has, I believe, been of some service.

Gastro-intestinal derangements, as indigestion, constipation and auto-intoxication, are complaints common to the prisoner. The reason for this condition is that the majority of prisoners are men who lead an outdoor life when at liberty, and they are accustomed to more exercise than it is possible to give them when confined in prison.

In addition to this, confinement inflicts a form of mental depression which in itself tends to retard digestion and induce intestinal stasis. For this condition it is our custom, at regular intervals and as often as it may be necessary, to give a solution of magnesium sulphate.

Auto-intoxication (self-poisoning), generated by the body from its own tissue and from by-products of foodstuffs absorbed by the gastro-intestinal circulation, is the corner stone for all chronic maladies of mankind all over the world.

Disease is the greatest enemy of man, coming from within or without. A multitude of its mysterious forms are unexplained, and to the undoing of disease all human laws must yield.

In the conservation of men lies the physician's highest service.

"It is disease within the prisoner's soul
Which wrought the change in heart
From love and peace to sin and crime.
Disease is the demon that dwells within
To make him turn against fellow men.

"Prisoner, renew communion with thy God;
Preserve and purify the house He gave;
Retraee thy steps from crime and sin
To follow those of loyal men."

SPINAL ANESTHESIA*

By JOSEPH A. MENDELSON, M. D., New York City.

Any departure from the time-honored precepts of tradition is received with caution, and we of the medical profession are prone to do things merely because they were done by others before us, even though a rational explanation be lacking. The endeavor to introduce something not done by

*From the Med. Rev. of Rev. of June, 1917.

us each day or by our predecessors brings forth the comment, "We are very conservative."

We are told of an incident which occurred in the early days of asepsis. A progressive surgeon who early believed in asepsis had as a visitor in his clinic, a gentleman, also a surgeon, who had not time for asepsis. The visitor on being invited to come down from the benches so as to be better able to observe the operation replied that he preferred to sit where he was and cast septic glances on the field of operation. This is not funny. It is lamentable!

The idea of intradural anesthesia is not new, but the refinement of technique is comparatively recent. Here, too, we have the person who lacks proper knowledge making disparaging statements. We are reminded of a widely known surgeon who, before a meeting of a medical society, condemned spinal anesthesia. When questioned by one of the members who knew the when and how of intradural injection, the surgeon showed a woeful lack of knowledge concerning stovaine and the method of its employment. We have heard it said that in this day a surgeon requires more than an accurate knowledge of anatomy or a wonderful rate of speed to cut and tear in a few hours, like a clever butcher, a great number and variety of pathological processes from the bodies entrusted to his tender mercies.

Spinal anesthesia offers in selected cases a medium for painless surgery which surpasses by far any of the older anesthetic agents. The surgeon or anesthetist who knows his physiology, toxicology and the other fundamentals, will find in stovaine an ideal analgesic for operations below the diaphragm. The technique of its administration is simple. It requires no more skill than the lumbar puncture. The interspace selected for the puncture depends on the height of anesthesia desired.

Stovaine for intradural injection is sold in several forms, tablet, powder and ampoule. According to Dr. W. W. Babcock, of Philadelphia, the authority in this country on the subject, the latter is preferable because it does not deteriorate so easily and can be sterilized, minimizing the danger of bacterial contamination. The formula recommended is:

R			
Stovaine	.98	} Sp. gr. lower than that of spinal fluid.	
Lactic acid	.02		
Absolute alcohol	.2		
Distilled water	q. s. 2. c c		

The dosage depends on the age and condition of the patient. A graduated Luer syringe and a spinal needle are practically all the apparatus required.

The patient's back is prepared by applying over the spine a solution of iodine crystals in acetone. The patient prior to being brought to the operating room is usually given by hypo an injection of morphia and scopolamine. The anesthetic is given with the patient in a sitting posture on the operating table. Immediately after the injection, the patient is placed flat on the table with the head and shoulders a little lower than the rest of the body. Respiration is watched by means of a wisp of cotton held over the nostrils. The pulse and blood pressure are observed as usual. Danger of accident is small. Stimulation may be given if there is a marked fall in blood pressure, respiratory embarrassment, or if vomiting occurs. These, however, are negligible factors if the head is not raised or the dose not too large. Where stimulation is indicated, it may be given by mouth or inhalation in the form of aromatic spirits of ammonia; by hypo, camphor in oil, or caffein and strychnia in full doses. Adrenalin in salt solution given intravenously is a most powerful and effective stimulant.

Operation may be started five minutes after injection, the pain sense usually being abolished in this short space of time, though pressure sense may be present. The preliminary dose of morphia and scopolamine serves to do away with this and also to prevent the patient from observing what transpires during operation. Sometimes the patient may be engaged in conversation throughout the operation. He may not be aware that anything is being done to him until it is all over. Liquids may be given promptly, and post-operative discomforts are at a minimum.

Before employing this form of anesthesia one should have a complete knowledge and understanding of what is to be done and what the effects may be. He must also know the contraindications, the emergencies that may arise and how to treat them.

A DAY WITH THE ASSOCIATED CHARITIES STAFF (Responsibilities and Definite Duties of the Various Members of the Staff.)

GENERAL SECRETARY

The executive officer of the organization. Ex-officio member of all committees and is present at meetings not conflicting with previously arranged appointments. The general supervision of all case work. Special supervision where relief is given for any length of time; cases involving large expenditures; cases presenting especially difficult problems; cases where court action is about to be taken; cases

where a question has arisen as to treatment; cases involving a difference of opinion between ourselves and some other agency.

The O. K. of all written reports sent out in the name of the organization.

The compilation of the monthly statistical report as a means of studying the case work done.

The development of other forms of statistics of interest. The studying of community problems in general and devising plans for meeting various social needs of the community.

Assisting in the development of any needed organized social effort in the community.

The development of volunteer workers and the supervision of their tasks.

The interpreter of the Associated Charities movement to the community.

DISTRICT SECRETARIES

Responsibility of all families brought to our attention within the boundaries of their respective districts for rehabilitation.

The development of co-operation of the various agencies and resources of the districts.

Compilation of family records and clerical detail incident to this work.

The development of the case committees and presentation of cases to committee for consideration and discussion. The development of volunteers.

VISITOR-IN-TRAINING

Her time is divided between each district and is devoted to case work. She attends case committees and occasionally presents a case upon which she is working, she of course doing all the clerical detail in connection with her families upon which she is working.

REGISTRAR

Has charge of the telephone exchange, answering all incoming calls for Associated Charities and Visiting Nurse Association, ranging from 16 to 35 daily.

Work incident to the Confidential Exchange(which means modernizing the Exchange. Making a registration card and one to five street address cards for each case, giving each their respective number and filing same.

Is in charge of the Self-supporting Coal Fund. Places all orders for coal whether paid for or given.

Have recently taken over the bookkeeping connected with the Special Account Fund.

Takes special dictation.

Interviews applicants and visitors, directing them to the special person or agency they desire to see, and registering same.

Make registration cards for all out-of-town inquiries and refer them to secretary of the district to be visited.

Register all Visiting Nurse Association cases for confidential exchange.

Record all relief on Associated Charities treatment cards. Being the oldest employe on the staff, acts as "special bureau of information."

STENOGRAPHER

Taking and writing up all dictation on case records. Writing general correspondence.

Copying all records before installing new forms.

Assisting with registration bureau.

THE DAY'S PLAN

The office is opened at 9 a.m. From 9 to 9.45 is spent in planning the day's work, while awaiting the morning's mail, so that any families requiring immediate attention may at once be gone on.

Each worker has definite hours for giving dictation. When not working under extreme pressure these hours are rigidly adhered to. The district secretary not giving dictation or doing other tasks that have to be done in the office in the morning is out in her district visiting. The major portion of the afternoon is given to field work, except on such afternoons as they have case committee meetings, when a portion of the afternoon is given over to the meeting and preparation thereof.

A day-book for each district is kept where all visitors to the office, whether consultatives or applicants are recorded; all visits entered, 'phone calls listed, etc. This is invaluable in compiling our case records in the order in which the visits occur.

The secretaries, prior to the close of the day, either report at the office in person or 'phone, so as to be assured that no emergency case is required to go over until the next day unprovided for. Frequent night visits and even visits on Sundays and holidays are necessary in order to be able to see people who are employed during the day and who cannot be seen at their places of employment.

A RECORD OF ONE DAY'S WORK

The day selected was March 5, 1917. The reason for selecting this particular day was due to the fact that it was the day of the joint case committee meeting.

The office opened as usual at 9 a. m. From 9 to 9.45 was

spent in planning the day's work. As Miss McAllister, the secretary of the East Side District, had just received word of the death of her sister, it was, therefore, necessary to readjust the work. Miss Stevenson, the visitor-in-training, who is on duty in the West Side District, Saturday, Monday and Tuesday, had to be transferred to the East Side District to carry the case work until the return of the East Side secretary. The city is divided into two districts as referred to above. Miss K. Y. Mills, being the secretary of the West Side District, and Miss M. G. McAllister, the secretary of the East Side District. A complete readjustment of work was therefore necessary to enable Miss Stevenson to take charge of the East Side District in the secretary's absence.

THE WEST SIDE DISTRICT'S DAY

There were ten callers at office; two being from individuals interested in definite families and two persons interested in the work in general and to talk over community problems. The other six visitors were families at present under our care, as follows:

1. This family has recently been brought to our attention, due to the father, 40 years of age, being ill with pneumonia and having a wife and four children dependent upon him. The family is very self-respecting and reliable. The employer, who was conferred with, speaks well of him and willing to render temporary assistance. The wife's father, who is a clergyman, was also communicated with so as to acquaint him with the conditions in his daughter's family and to secure any material assistance he may be able to render.

2. A homeless man, who has recently sustained injuries was interviewed and sent to the Delaware Hospital for treatment.

3. Family consists of father and mother, who is in bad physical condition, and four children. Have always been very poor managers, and while income has been adequate, have lived under most unwholesome conditions. The father left his place of employment because he was given additional work without increased compensation. His employer was gotten in touch with and it was learned he left on his own accord and that he was a good workman and they would reinstate him. He refused to go back and for the sake of his family other employment was procured for him at \$26.00 per week.

4. A respectable old colored woman, who in spite of her age, does all she can to be self-supporting. She pays for her fuel through the S. S. Coal Fund, and has to be supervised and encouraged.

5. This family who has been under the care of the organization was visited to ascertain present conditions. The mother is a widow with six children. The husband recently died of tuberculosis, and two sons had become infected. At the present time they are patients at Hope Farm. A complete plan for this family's rehabilitation had to be worked out to enable the boys to receive the much needed treatment, and the object of the visit was to learn if the plan outlined is being rigidly adhered to.

6. Case was referred by district nurse who had been much interested in family for some time, and asked A. C.'s help in finding employment for boy of 17 years, who is one of six children. His physical handicaps being minus two toes on one foot and several on the other. His father's income being adequate to meet their needs. One of the youngest children is a mental defective as well as blind, thus requiring the mother's constant care.

A letter received from the Washington, D. C. Associated Charities, and also a letter from the Board of Charities of the District of Columbia, telling us of two native Wilmingtonians who had gone to Washington to attend the "inaugural festivities" and who were stranded there. Both men claimed their return tickets and case disappeared while quartered with the militiamen. This necessitated a number of visits being made to their relatives. The relatives of one of the young men was willing to furnish his return passage but the other was not. The Washington Associated Charities was wired to that effect.

The district secretary had an appointment with the scholarship committee of the Consumers League to present a case requiring a scholarship. This committee meeting was later called off although it had been arranged for in planning the day's work.

Business relating to families under the organization's care was transacted with workers of the People's Settlement; nurse of the Delaware State Tuberculosis Commission and Probation Officer of the Juvenile Court.

Several letters were written in behalf of families. One telegram sent and one long distance call.

EAST SIDE DISTRICTS DAY

The usual morning routine as per schedule was carried out. Several morning visitors were interviewed. Letters were written in behalf of families under our care and visits of previous day recorded. The following families were visited and work done in their behalf as indicated in their stories.

1. Mrs. A. being an old A. C. record. Deserted hus-

band, and has been living with Mr. A. as his wife for the last three years. Has two children by legal marriage who are in the custody of the Juvenile Court, the husband living out of the city. Mr. A., who is known to be shiftless and dissipated, has recently deserted Mrs. A. and his two-year-old son. Mrs. A. having applied to various agencies to help her with rent was referred to the A. C. Visited to learn if Mrs. A. had followed our advice as to swearing out a warrant against Mr. A. for the support of their child. Learned that she had not done this and had no intention of doing so. Also found Mrs. A. unwilling to change her mode of life and exceedingly fastidious as to what kind of work she would do. Told her that under circumstances we could not put in material relief and when she felt differently about the situation to come to our office. Dictated letter reporting conditions to individual who last reported case.

2. Mr. B. in office asking that someone visit his wife who is ill. Says he had just come to Wilmington and had recently recovered from pneumonia and has only been working three days. As visitor was not in registrar told him someone would visit.

Later visited the B. home. This involved first investigation as the family had never been known to A. C. before. Found Mrs. B. ill in bed, her husband having gone to work. Nine weeks ago Mr. and Mrs. B., a young married couple, went to Carney's Point after the death of an adopted child. Mr. B. obtained employment as guard of the DuPont Co., but after three days' work was taken ill with pneumonia and was ill six weeks. On his recovery he went back to work too soon and had a relapse which set him back another week. By this time their savings were entirely exhausted. They then pawned some tools and clothing and came to this city, thinking that Mr. B., who was still weak, could get lighter work. A few days after their arrival Mrs. B. fell ill. Mr. B. obtained work as laborer at Harlan & Hollingsworth, but will not be paid until next Saturday. Hopes to find work that will pay better as he is a machinist by trade. Mrs. B. wants to go to her sister's in New York. Visitor promised to call city physician to determine whether Mrs. B. is able to travel. Learned there was no food. Left word for Mr. B. to stop at office in the afternoon to discuss advisability of going to New York. Stopped at nearby grocery store and had order sent to Mrs. B. Reported case to Visiting Nurse Association and 'phoned city physician asking him to call at once.

Later in the day Dr. Perkins, city physician, 'phones office that Mrs. B. is too ill to be moved. Must have nurse's attention as there is danger of blood poisoning.

Mr. B. came to office. Did not go back to work as he got

night work with the Bond Bottle and Sealing Co. at better pay. Harlan and Hollingsworth, however, will not pay him until next Saturday. His landlady will not let him keep room unless his rent is paid in advance and he has no money as all that he received from pawning tools was used for last week's rent and food. Gave us names of his former employers. Said he wanted to pay for his food if he could only get credit until pay day, but he knows no one in town to endorse him at the grocer. 'Phoned grocer and arranged for Mr. B. to get credit. Also told him we would arrange with landlady for rent.

3. Visited C. having A. C. record. C., a 13-year-old boy who was reported by the Tuberculosis Dispensary, where he is being treated, has not kept his appointments recently. C's. mother keeps him home from school on account of his ill health yet allows him to run the streets. Being unable to find anyone at home went to see C's. sister, a young woman living nearby, who takes a more sensible view of the situation. The sister promises to take C. to the dispensary on Saturday. While there discovered that her baby was suffering from what seemed to be some form of catarrh of the nose. Advised her to take baby to dispensary also. Reported result of visit to Tuberculosis Dispensary.

4. At the request of the child labor inspector went on first investigation of a case of a 14-year-old girl, who, while far behind in school record, had applied for working papers. The father of this family is earning \$14.00 a week and a 16-year-old child, \$7.00. The mother and 14-year-old daughter do crocheting which occasionally supplements income by \$2.00 or \$3.00. The daughter had missed a year at school several years previous because of sickness. This caused her to be back in her classes, and becoming discouraged and ashamed she refuses to go to school. Her parents do not see the necessity of forcing her. At first they gave the 16-year-old son "poor health" as an excuse for the daughter going to work. Later, however, said they did not think he would stop work even though sister got working papers, but they thought her wages would help buy clothes for the children. Could find no actual need in family, except some extra expenses incurred by sickness of children during the winter. Mother promises to take sickly son to the dispensary to have his lungs tested. Reported result of preliminary investigation to child labor inspector.

GENERAL SECRETARY.

A consultation with a local physician regarding two narcotic patients in whom he and secretary were much concerned. Delaware Hospital, a private sanatorium and the chief

of police were all conferred with regarding these patients. Talked over several family problems with the workers upon which they desired advice. Had an appointment at 2 p. m. to consider the housing problem. A meeting of the Co-operation Committee at 3.30 p. m. The joint case committee meeting at 4.30 p. m. Left the office at 6.15 p. m. to find three telephone calls awaiting the general secretary upon her arrival at her home. One from a private individual; one from Delaware Hospital, and the other from the police captain in reference to the two narcotic patients mentioned above.

THE REGISTRAR AND STENOGRAPHER.

Spent their day in carrying out their regular schedule as previously indicated, plus numerous minor tasks which they were requested to perform by the other staff workers.

This ends a rather typical day.

Respectfully submitted,

General Secretary.

AMERICAN WOMEN'S HOSPITALS.

The War Service Committee of the Medical Women's National Association has organized the American Women's Hospitals for work at home and abroad. The Surgeon-General of the Army and the General-Director of the Department of Military Relief of the American Red Cross have approved the provision made for service to the army and to the civil population. The work will be officially part of the medical and surgical service of the American Red Cross.

The scope of the plan is a broad one. It includes units for maternity service and village practice in the devastated parts of the Allies countries and hospitals run by women for service there as well as for the United States army in Europe. In this country acute and convalescent cases will be treated in hospitals equipped for the purpose; soldiers dependents will be cared for, interned alien enemies will be given medical aid and substitutes will be provided to look after the hospital service and the private practice of physicians who have gone to the front.

The first units hope to go to France and to Serbia in the early fall.

Headquarters have been established at 637 Madison avenue, New York City. Dr. Rosalie Slaughter Morton is chairman of the War Service Committee.

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MEETING OF GENERAL MEDICAL BOARD OF COUNCIL OF NATIONAL DEFENSE

PERSONAL

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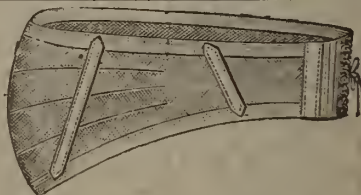
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Editor

DR. W. EDWIN BIRD

807 Delaware Ave.
Wilmington, Del.

Business Manager

DR. J. W. BASTIAN

915 Washington Street
Wilmington, Del.

Assistant Editor

DR. T. H. DAVIES,

Marshallton, Del.

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EDITORIAL JOTTINGS.

Greetings—At last, after months of conferences, debates and deliberations, we have decided to continue the publication of the Delaware State Medical Journal. You will note that this number, the first since September, 1917, is for the months of January, February, and March. We have decided that a monthly Journal is too inconsequential, since our State Society membership is so very small, and therefore this Journal will be published henceforth as a quarterly. We propose to make each number as large (or a trifle larger) as three of our former monthly numbers. We hope to be able to fill each copy with material written by Delaware men, for Delaware men, and about Delaware men. We hope to make each number distinctly helpful to our members. We hope to have our original papers of such a quality that they will be abstracted and quoted in the other medical journals, a feat that will be practically unique in the history of this Journal. It is not to be conceded for one minute that the experiences of the profession in Delaware are so commonplace that they do not deserve to be published; hence, we take this occasion to remind our readers that it is up to them to make this Journal what it ought to be—the Editor is merely a collaborator, a collector, and is not expected to write each month sufficient copy to fill a Journal, even as small a one as this. We request that the papers read at the various monthly meetings of the county societies be forwarded to us for publication.

Finally, in keeping with the high cost of living, which applies particularly to printing and postage, we have been compelled to Hooverize to the extent of revising our mailing list, so that only members of the Delaware State Medical Society will receive this Journal gratis, as in the past. All others who wish to receive the Journal will be required to pay the annual subscription rate of one dollar per year.

We have every reason to believe that it is only a matter of time before every physician between the ages of 21 and 45, will be required to register for a selective service with the armed forces of the United States, and that of that registration practically every man who is physically fit to serve will be compelled to do so. The authorities at Washington are culling over those who have gone into the services, with the result that several thousand have been found unfit for one reason or another, and dismissed accordingly. These vacancies plus those to be filled if the Army is to be increased, as seems likely, must be filled by men above the average age of those who were the first to volunteer. It has been the experience of the various Surgeons-General that the best medical officers were those between the ages of 31 and 45, and it is these men that the Army proposes to secure. The necessary legislation has not yet been introduced into Congress, but we venture the opinion that it will not be very long before it is. We hope to be able to publish soon a complete list of the doctors from Delaware who are in the various services together with their present station and rank.

We extend our congratulations to the Minnesota State Medical Society on their achievement in publishing their own State Medical Journal. The newcomer is one of the best State Journals we have yet seen. We wish it long life, much happiness, and great prosperity.

The 128th annual session of the Delaware State Medical Society was held in the New-Century Club, at Middletown, October 8 and 9, 1917. It was the largest, most interesting, and most instructive session yet held. The opening prayer was made by the Rev. O. L. Donaghay, followed by Mr. W. B. Letherbury, who made the address of welcome. Dr. James Beebe, the president, then made a short address, after which the report of the House of Delegates was read and adopted. Luncheon was served by the ladies at the club-house. The conclusion of the session was as follows:

Dr. Beebe: My term of office is about over and I have had very little opportunity to forward the interests of the Society, but I expect to remain an active member of the Society and

endeavor to do everything possible to help my successors in every way, at every time, and I hope that you will in after times turn out to the meetings. This has been a very successful meeting and I wish to thank every member of the Society for coming, and every member who contributed to the program. I would ask for a rising vote of thanks for those contributing, and I also wish a rising vote of thanks to Dr. Dorsey W. Lewis, for all he has done for us.

(A rising vote of thanks was then given.)

The President announced that the Society was ready for nominations from the floor for President.

Dr. H. W. Briggs: I count it an especial privilege to nominate the man whom I shall name for President of our Society after today. I have known him 20 years, personally and professionally, and I can say that no man has done more for the Delaware State Medical Society than he whom I shall name as candidate. Last night the House of Delegates saw fit to relieve him of his arduous duties as Secretary, and to place on him the benediction of "Well done, good and faithful servant." I take pleasure in nominating as President of the Society for the coming year, Dr. G. W. K. Forrest.

(Loud applause.)

Dr. Willard Springer: I make a motion that we elect him by a rising vote.

(This motion was seconded and carried.)

Dr. G. W. K. Forrest, Wilmington: This is the time that I envy you. I envy Dr. Willard Springer, his flow of words in a position of this sort. A fellow is so much overcome by a feeling I don't know how to express. I don't know any honor greater than to be President of the Delaware State Medical Society, and I feel I thank you all for your kindness.

Adjourned sine die, 3.15 P. M.

The next annual session will be held in Wilmington, October 7 and 8, 1918.

A Plea For Medical Supervision of Schools For Delaware

Dr. James Beebe, M. D., Lewes.*

Fellows of the Delaware State Medical Society: I wish to express again my appreciation of the honor conferred upon me at the last annual session of being elected President of this, the second oldest State Medical Society in this country.

Owing to the existing state of war which has enormously increased the duties and responsibilities of the medical profession as a whole, my opportunities for furthering the interests of the Society during the past year have not been many. I have endeavored to co-operate with the officers of the Sussex County Society in effecting a re-organization, but the results so far have been rather discouraging. I have also been in frequent communication with the Medical Section of the Council of National Defense, and in this connection I wish to state that I have recently had a letter from the Chairman of this section advising that Delaware's quota of physicians for the Medical Officers' Reserve Corps was 37, and that thirty of this number had already been commissioned, and requesting me to urge that the men who had received commissions and had not accepted same, either accept or reject them at once.

In order to ascertain the percentage of physicians in the State of Delaware, who are members of their county and state society, I recently secured from the Clerk of the Peace of each county, a list of the regular physicians licensed to practice in that county and I find taking the state as a whole that less than 45 per cent. are members of the Society. This should not be; there is no reasonable excuse for any reputable physician not being a member of his county and State Society and I for one would favor a resolution that no member of this Society should consult with a physician who does not take enough interest in the profession not only to become a member, but remain a member in good standing of the society.

I would suggest that each county society inaugurate a membership campaign during the coming year, the fruits of which will enable our next President to report a healthy increase in membership. Let me urge upon you once again to get together; it is only by organization that we can accomplish anything worth while.

*Presidential address, read before the Delaware State Medical Society, Middletown, Oct. 9, 1917.

The subject which I will present for your consideration is the Medical Supervision of Schools. In selecting this subject I was influenced by the experience gained as one of the examining physicians for the Local Draft Board of Sussex County, which forcibly impressed upon me the need of conserving the health of the growing child. I realized more than ever that the old saying, "The boy is father to the man," is a true one in many respects.

The percentage of physically deficient among a body of young adults mostly from rural communities was appalling, but the most impressive fact in this connection was that a large percentage of those deficient were suffering from conditions that could have been prevented or remedied by proper treatment in early life, such as heart lesions following tonsillitis and chorea, defective vision, defective hearing, chronic otitis media, loss of teeth, asthmatic conditions with the associated nasal obstructions, mouth breathers, club feet, deviations of the spine, congenital hernia, etc.

During ten years as a general practitioner I have noticed that the family physician rarely pays much attention to the children of a family other than those suffering from acute illness; in fact, if he notices some pathological condition and suggests the correction of the same, in most instances his suggestions are ignored, the family being too apt to think the doctor is looking for a fee.

A child in good physical condition is much more proficient in his studies and much less susceptible to infections or contagious diseases than one who is continually below par, and one of the most effective means of bringing this about is through the medical supervision of schools.

If we hope to solve the problem of eliminating disease as a cause of death and prepare the way for man to live to a ripe old age, passing away peacefully and without pain, from natural causes, instead of being plucked in the flower of his youth we must approach the solution from all points, one of which is to awaken the State to the necessity of looking after the physical as well as the mental welfare of the school child during this most important period of child life.

The first systematic medical supervision of schools was begun in America about twenty years ago. Medical supervision of European schools was begun only a few years previous to this. The earliest school supervision in this country was done more from the standpoint of preventing and lessening illness from the acute contagious and infectious diseases among children of school age, than from the higher and better motives of improving the race. At present the medical inspector is as much concerned with the conservation of child life and with the building of a sturdier race of Americans as

he is with the immediate results of lessening communicable disease and mortality rates. While the prevention and lessening communicable diseases is necessarily to be kept in mind, by far the most important phases of medical supervision are those dealing with problems of hygiene by practical teaching and by medical inspection of the individual pupil, and the giving of proper advice and treatment to those found defective, and surrounding the child with proper sanitary precautions in grounds and buildings, with a safe water supply.

A number of states have passed laws permitting medical supervision of schools in all districts while a few have limited it to the larger cities. The State of Pennsylvania, in the adoption of a new school code, set a new standard for school supervision. It provides that school children shall be inspected at least once each school year by physicians having at least two years experience in the practice of medicine and that these physicians shall make the sanitary inspection of school grounds and buildings; provision is also made for the teaching of physiology and hygiene, including reference to alcoholic drinks and especial reference to tuberculosis and its prevention, to all pupils of all grades. This code also provides for the exclusion from school of those, having tuberculosis of the lungs, whether pupil, teacher, janitor or any other employee.

Every child should receive a thorough physical examination, paying special attention to the eyes, ears, nose, mouth, throat, lymphatic glands, gross deformities, general nutrition, and evidence of serious disturbance of the nervous system such as epilepsy, chorea, etc., also for evidence of communicable disease. A standardized record should be kept of the results of such examination which should follow the pupil from year to year.

The parents should be notified of any defects that are remedial and be advised to consult their family physician regarding the correction of the same. With the exception of communicable diseases, the power exercised by the health and school authorities is purely advisory.

The supervision should also include the sanitary inspection of grounds and school buildings, regarding air space, lighting, ventilation and heat, water supply and sewage disposal of the school buildings and surrounding properties. The inspector should notify school authorities of any defects found and outline the measures to be taken to correct the same. It has been found that the benefits derived from such investigations are not limited to the children but extend to the education of the parents; the teaching and enforcement of personal hygiene to the child has proved one of the most effectual methods of teaching its advantages to the parents.

In conclusion I would say that the medical profession of

Delaware is not responsible for the lack of these provisions except in so far as it may fail to forcibly present the need of them to the proper authorities. I would suggest that a committee be appointed to confer with the health and school authorities and draft a bill to be presented to the next legislature providing for medical supervision of schools in Delaware.

OUR DUTY

By H. W. Stubbs, M. D., Wilmington*

Life is largely made up of work, which may be a duty to ourselves and patients.

One cannot succeed unless he is fully alive to his obligations. I am trying to fulfill my duty now in writing this paper.

It is our duty to eat good, wholesome food, bathe and dress properly in order to keep physically fit for our work. We owe certain duties to Society, to the Church and to our Country. On the same grounds, we owe certain duties to the State and County Societies—which none of us accept.

As President of the Board of Trustees of the State Journal I am appealing to you. We should stand by the Journal and the editor, which none of us are doing as we should. He must be upheld; he is doing his part—are we doing ours?

I venture the prediction that the Secretary of this Society has solicited most, if not all, the members to read papers, for this and previous meetings. Have we complied with his request? You and I know we have not responded as we should.

It is much easier to float or swim with the tide; that does not develop muscle or strengthen the brain. One should battle with the waves and stem the stream to gain courage and force.

I admit I am neither an orator or a writer; it is a sense of duty that impels me to attempt it. I have only written a very few papers for our societies and have been astounded when I have received letters from doctors in Seattle, Indianapolis, Hot Springs and New Orleans, stating they had read extracts from them copied from our State Journal asking for reprints, going to show that the Journal is read by quite a large clientele.

One who writes a paper is greatly benefited. He must

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look up authorities, thus making him more familiar with the subject; hence the mental exercise.

True success depends largely on writing articles for the journals. Take two men of equal ability in the same profession; one writes up his cases and experiences, the other does not. The one who writes for the periodicals will far outstrip the other. We should not expect finished papers from many of our members—none of us are connected with teaching institutions.

I was located for twelve years in the country, hence I know the doctor and his difficulties, although conditions are very greatly improved since I practiced in Kennett Square. They did not have telephones or automobiles then. I know they are resourceful, quick to act, clear brained. If they would write up some of their cases, stating how they treated them and why, it would make very interesting and instructive reading. It is not the highly scientific paper that is most beneficial to us; it is what was done and why, in emergencies.

I am appealing to this society for more papers written by its members for both State and County Societies; we will then have the Journal filled with home material, useful and helpful. The editor would not be compelled to pad it with outside material.

I would suggest that we now resolve to turn over a new leaf; during the winter we will each of us write two papers for our County Society and one for the State Society. Why? To make us better physicians through becoming more familiar with the subject we write on and the discussion of same by members. Lastly, and very important, to sustain the editor.

Do you realize the Journal is the only means we have of coming before the profession of the State? The Journal should be the most important adjunct of the Society. The editor cannot make the Journal a success; it lies with the individual members of the Society, so please don't censure the Board of Trustees or the editor for any lack of interest the Journal may have for you.

DISCUSSION.

Dr. S. C. Rumford, Wilmington: The Journal is our only way of coming before the State Society, or the physicians of the State. We would write papers, and all medical men have interesting cases that they could write of. It impresses the cases more thoroughly on your mind and both the medical men and those doing surgical work will benefit. I think we should produce enough matter for The Journal without having to bring in a lot of material written by other men. Some of it is very good, but if we can fill our Journal we should. Dr. Springer tells me that it has been decided to change The Jour-

nal to four editions a year, and I think it is a very good thing and we ought to be able to write good papers to fill these various editions that come out.

Dr. H. W. Briggs, Wilmington: I think this would be a good time to discuss, or rather call the attention of the society to a point brought out in your address, Mr. President. To me, this is a very important point; the fact that the County Societies should get busy and see that there is not a single man in the county eligible for membership in the county societies who is not a member. Their being a member of the County Society, (which, as you know, is the unit for the State Society and in turn the State Society is a unit for the American Medical Association.) is a privilege and a thing to be desired by any man in the medical profession and it only remains for the members of the county societies now to make a thorough canvass and go over carefully the list of physicians in the different counties and see to it that these men are invited, and do become members of this State Society. Now he states that about 50 per cent. of the members of the Medical Society of the State of Delaware belong to this society. I am really surprised to know that we have that percentage. I know at the meeting of the House of Delegates that there were plenty of eligible men still to be had as members, according to the discussion. I think we can say for New Castle County that we have them pretty well looked over, excepting the Homeopaths. If we could get the good reasonable practitioners of that it would be a good thing. They are accepted for membership in the American Medical Association. That is the ethics and code of the American Medical Association, without regard to the college from which they graduated as long as they represent the products of reasonable medicine. In connection with this, everything helps, but the suggestion Dr. Stubbs makes that the larger we get, and the stronger we get the more we are going to take care of the obligations of our members. I believe and hope that within the next year we will increase up to our fullest efficiency. In other words we will have men eligible in our county societies for this society. A very important thing is, we now have a very nice Medical Defense Fund, which practically means not only the moral backing of the entire State Society, but the financial backing if need be to protect him against any malpractice suit or defamation of character, and I think it is our duty to see to it that every eligible man in the State of Delaware becomes a member of this society.

Dr. J. W. Bastian, Wilmington: I do not think there are 10 per cent. of the men in Wilmington who are not members of our society. As Dr. Briggs just said, there are some 15 or 20 who would gladly come in, but whom we do not desire.

Dr. F. H. Edsall, Wilmington: Although I am not a mem-

ber of this society at the present time. I have been and am a member of a good many societies, and believe in organization. The county society is the unit of organization in the medical profession and it is through the county society, organization perfected must be undertaken. The personal effort will go a long way and I think if your State, and my State now, is suffering from a lack of interest in society membership that if the President of the State Society were to confer with the several county societies and find out what the difficulty is and have the county societies appoint a committee of one with a list of the men who are practising in the county and who are not members of the society, to personally visit and bring to his attention the very great privileges he will have in membership in the society, a good many more members can be obtained. I know across the river in the State of New Jersey, two or three years ago, there was the same lack of interest in the County Medical Society and Dr. Gray, who was at that time President of the State Society, and since dead, but an active, pushing man, visited each of the county societies in the State and through his efforts in this direction succeeded in securing increased interest in society membership and very largely increased the number of members. With Dr. Gray's retirement from office there were comparatively few good men who had not become members. My observation has been in various parts of the country that the best organized community so far as the medical profession is concerned is where you have the best grade of practitioners in county, city and State; but that is where the interest in society work is lax it is usually so because the practitioners are not of the type that could gain anything from society membership, or they feel that they can't and it is a community where every man's hand in the profession is against the other, and the only idea is to be medical tradesmen rather than medical professional men. The financial side of the profession is the only one that interests them. Dr. Stubbs has mentioned the matter of adding to the interest of The Journal. Of course your County, and State Societies are the places where we talk over things of interest and gain many points of value from leaders in the profession, and where rough places can be smoothed out. The Journal is the means of communication between the members of the profession and should be supported, and if it is supported will become a valuable thing to the State in general, and I believe Dr. Stubbs' urgency applies not alone to this State but to all State and County Societies, and that every means should be taken to increase not only the membership, but the amount and character of literature that goes into the State publication.

Dr. Stubbs: If we make it so interesting with our discussions that these people will be knocking and clamoring to

come into membership, they must be interested and we have got to give them something. It is not so much that they don't want to come, but we have got to make them come.

Dr. Beebe: The difficulty in Wilmington I think is to avoid men who are not eligible. It would be well for the societies of the lower part to get a list of these men who would be eligible for membership before they approach them. I think Dr. Stubbs is right, that it has not been a privilege, but more of a duty to attend the meetings. Nevertheless some of the men should come as well as ourselves.

Dr. W. O. LaMotte, Wilmington: I am glad that Dr. Stubbs thought fit to write on this subject, and possibly arouse interest enough to induce members to write the papers whose importance Dr. Stubbs tries to enforce upon them. One thing Dr. Edsall mentions has often been in my mind. I have understood that the President of a Society was more of an honorary position, that he simply presided over the meetings of the Society. I have often thought that if the President would send us word that he was going to be with us, we could arrange a good attendance, and it seemed to me that would be a good thing to do in all of the societies, to arrange a special meeting the night the President of the Society attended.

Dr. Beebe: I think the President should be with the County Societies at least once during his term of office. I understood that the County Society in Kent County was practically extinct. I understand that it has made a healthy recovery.

Dr. John Palmer, Wilmington: I was thinking while listening to the discussion that the members of this Society that want to come into prominence might read papers. Two years ago—this is just to follow up the remark Dr. Stubbs made about The Journal evidently being read—two years ago I was very much interested in the subject of anthrax and wrote a little paper to our State Society. Since then and clear up to this time I am getting communications from different parts of the country as to anthrax, as to its treatment and as to the management of the cases. Just recently I got the Bulletin from the Agricultural Department of the U. S. Government speaking on accidental diseases and there was a whole lot of what I said in my paper in it. As a matter of fact when I read the paper it was just for our local people. I had no notion that it was a United States affair. As a matter of fact it is. A greater part of it has been copied into the Leather Report papers and a number of papers interested in anthrax. I have received invitations to come to the meetings of some of these national organizations which are discussing just that subject of anthrax. So as I say, when that paper was read I had no notion of coming out into the limelight. That paper itself put Wil-

Wilmington on the map as a place where they had anthrax and where they had people who knew how to treat it. Now, without throwing bouquets at myself, I may say apparently, I am the only doctor in the United States that has personally seen the number of cases of anthrax that I have. There have been States in which there have been more anthrax than in Delaware but they have been distributed among many more people.

Dr. Beebe, Lewes: During the last few years I have had experience with cases of anthrax coming from a tin box factory where they make mangle brushes. The last four or five years, workmen have exhibited intense edema of head and neck and with no lesion externally. We finally decided they were anthrax edema and so reported them to the State Board of Health and Dr. Watson did not take any action in the matter at all. In the course of six or eight weeks there developed another case and it was reported as diphtheria and a swab was made from the throat and the report came back from Newark, "Lots of anthrax bacilli." They had another case at the same time which died from pulmonary complications. In handling the bristles they get dusty and the symptoms are those of intense infection, high temperature, general aching and pulse way out of proportion to the temperature, 140 or 160. They die usually in 72 hours irrespective of what you do for them.

Dr. Bird, Wilmington: We get four or five requests every month for copies of The Journal from all over the United States. It is the sole means by which we keep in touch with the profession elsewhere. Pride alone should make the men of Delaware contribute to that Journal, and to give it their heartiest support, even though it be a losing proposition financially. Some things cannot be measured in terms of mere dollars and cents—and the dignity and reputation of this State Medical Society is one of them. With no institution in this whole State engaged in medical teaching or medical research, it becomes all the more urgent that we not only continue the Journal, but make it what it ought to be, and can be—a real Journal, with influence and reputation, and not the mere pamphlet it has hitherto been. But to do this, we must have 100 per cent. co-operation—the Trustees and the Editor alone cannot make dreams come true—you must ALL help.

Fraternity and Co-operation

By P. W. Tomlinson, M. D., Wilmington.*

Professional ethics involve both the individual and the profession. The least manifestation of professional discourtesy leads the lay mind to disapprove of the guilty individual by discrediting the profession. All professions suffer by such misrepresentation. The medical profession is no exception. Envy, jealousy, and ungenerous rivalry too frequently scandalize our ranks. Our love and loyalty to our great and honorable profession require us to accord to every accredited confrere a square deal and a fair field; and even compel us to spread a magnanimous mantle of courtesy and charity over minor deficiencies and unpleasant peculiarities.

We too frequently suggest suspicion to the public mind, much to the injury of our noble science, by our ethical misconduct towards our medical associates. Such an unprofessional spirit cannot fail to encourage distrust and hostility in those who are always inclined to suspect and discredit everything beyond their comprehension.

This is particularly true of our too common, unfriendly attitude towards all innovations, and our general intolerance of the progressive spirit of the age. We are too apt to cry, "Quack," "Faker," "Charlatan," at any one who dares to lift his head above the dead level of inoffensive mediocrity, and proclaim a discovery, or propose a departure in theory or practice.

We who are no longer young, must realize with the rest of the world that it is not the "New" that is under suspicion, but the "Old." Old eyes, old ears, old hands are constantly causing apprehension. This is the significance of the "time limit" and "old-age-pension"! Science and civilization take no chances. They clear the path of progress. The tyranny of the past is over. An ancient good outgrown is a present evil, to be discarded. Hoary creeds with their absurdities, gory superstitions with cruelties, and undeveloped science with its erudities have vanished before the advancing dawn of the "new" and the "true."

We must regard our brother's art and accomplishments in the spirit of family pride. We must count his discovery or invention as a victory for the profession. His honor is ours.

*Read before the Delaware State Medical Society, Middletown, Oct. 9, 1917.

Our gains and losses are both mutual and individual. His personal achievement is a professional asset. A profession is a fraternity. Ours is the most confidential and sacred profession in the secular world—dealing as it does with the most sacred and secret interests and relations of individuals and families; and frequently determining the question of life and death.

The very heart of fraternity is co-operation. How often we forget this and outstretch all other professions in ungenerous competition and relentless rivalries. Competition means selfish isolation. Co-operation means friendly associations. Competition to be fair and just, must be based upon an absolute equality in all the conditions of the contest. This is impossible. No two, though twins, are equal. Co-operation is the basic principle of all righteous and successful organization. All can co-operate; only a few can fairly compete. The weakest can help the strongest. Co-operation multiplies power by adding the units of action and service. The principle of the process is known, but the ratio of the increase transcends man's mathematics.

We are almost omnipotent by virtue of association and co-operation. The law of mutuality, rather than that of individuality, is the most widely and intensely operative in the universe. Nothing exists for itself. Everything depends for its completeness upon some other thing. The great nations of the earth need each other's genius and products. The human family is one, by reason of diversity of gifts and co-operation for common benefit. We are heirs of all the ages. Departed generations wrought for us. They guessed; we solved. They scented the secret; we discovered the fact or the formula. Fraternity and co-operation underlie all life. This is the foundation of all organizations. Remove it and our entire social structure totters and crumbles.

Our noble profession animated by these principles of fraternity and co-operation must move on and up. It will not cut the thread of history behind. It holds fast the costly gains of experience, and presses on. It is not held in the grasp of a dead past. It is not in bondage to the yesterdays. It is free to drop the outworn and outgrown. The road remains, but the traveler moves on. Truth is too vital to be buried in unchanging forms. But the test is the best. That is true and good which works out best in use.

“God give us men. The time demands
Strong minds, great hearts, true faith and willing hands.
Men whom the lust of office does not kill;
Men whom the spoils of office cannot buy;
Men whom possess opinions and a will;

Men who have honor; men who will not lie;
Men who can stand before a demagogue
And damn his treacherous flatteries without winking;
Pure men, sun crowned, who live above the fog
In public duty and in private thinking."

DISCUSSION.

Dr. Henry J. Stubbs, Wilmington: Who dares to say that the Delaware State Medical Society is not alive? After hearing such a tribute none of us can go home uninspired. I am sure we can lay every word to heart.

Mitral Regurgitation

By David Rossman, M. D., Wilmington

Mitral regurgitation is a common organic lesion found in children and young adults. The medical profession of the present time is greatly absorbed with the problem of stamping out new diseases, or preventing old diseases from gaining a fresh foothold. When small-pox reappears in a community there is almost a calamity, people are vaccinated, whole districts are quarantined; millions of dollars are spent every year to combat tuberculosis infection, and yet, the prevention of heart disease, which heads the death column of statistics of every well organized community, is sadly neglected.

To prevent heart disease as much as possible, we must turn our attention to the period of life when it is most apt to develop, namely: Between the ages of three and twenty. It is during this period of life that tonsillitis, inflammatory rheumatism, chorea, measles, diphtheria, scarlet fever, influenza, are very frequently complicated by endocarditis, with subsequent mitral involvement. Statistics that I have gathered from the works of prominent men show the following: (Weils) of 237 cases of endocarditis, 150 were due to rheumatism, 39 to chorea, 12 to scarlet fever, 15 to tuberculosis, 7 to measles, 7 to diphtheria, 7 to pneumonia. Church gives eighty per cent. of endocarditis due to rheumatism. Fuller, Eहेle, Still, Holt, Jacobi, give seventy per cent. of endocarditis due to rheumatism.

Next in importance is chorea. Scarlet fever stands out first in the exanthematous diseases. Rheumatism being the greatest predisposing cause to endocarditis, it is commonly

said that the age incidence of endocarditis is the age incidence of rheumatism. Heart disease is less common, probably much less common, among the children of the well-to-do than amongst the poorer classes. If this is so, it suggests that this terrible disease, one of the most distressing diseases of childhood, is to a great extent preventable. It seems probable that the most important factor in the causation of rheumatism from which heart disease usually results in childhood, is exposure to cold and dampness, and it is fairly on this account that the children of the poor classes suffer much more with rheumatism in all its manifestation than do children of the well-to-do. I do not mean to say that dampness and colds causes rheumatism, but I do think in some way exposure to cold and damp favors infection with the *diplococcus rheumaticus*. Housing conditions among the poor leads to house-to-house infection. I have carefully searched for a definite symptom complex that could guide or warn us of an oncoming acute endocarditis, but I was greatly disappointed, because very often we find a well developed case of endocarditis with a history of slight growing pains in the joints, slight fever, slight sore throat, not severe enough to go to bed, but in the majority of the cases we will find acute endocarditis beginning with a rise of body temperature complicating another febrile disease, and produces exacerbation of the fever if the temperature of the fundamental disease has already reached normal. It rises again with the endocarditis. The temperature may return to normal, and rapidly shoot up again with each new attack, frequently marked by the recurrence of rheumatic pains. The pulse rate is always accelerated, but the rhythm usually remains unchanged.

In the treatment of heart disease, there is one remedy which above all others is of supreme importance, and supreme value: Rest. No change of air, no dieting, no drug, can compare with rest. Rest is the *sine qua non* in heart disease, and yet how difficult it is to secure!

Here is a doctor called in to see a child with a case of tonsilitis, with a high fever or chorea, or inflammatory rheumatism. He examines and prescribes for his little patient, and most likely he is told by the mother, "that it is only a little sore throat, or a little rheumatism, and if the child gets any worse, she will let the doctor know." Here is where the trouble begins, or the child's future is in danger. A physician would not think of dismissing a woman patient who consulted him for irregular menstrual trouble with foul discharge, with the history of tears of the cervix, without warning her of a possibility of beginning cancer. There is no reason why the doctor should not warn the mother of a probable chronic endocarditis resulting from a simple tonsilitis, chorea, or rheumatic fever.

Here is a little child whose mitral disease is still at a

stage when one or two months of quiet rest in bed may cause all signs of heart disease to disappear, or failing this, may secure many years of happy and useful life; and yet the parents will submit to almost anything rather than keep the child in bed. No doubt the child dislikes it. It is difficult to keep it amused in bed. It is only natural that the sick child is a spoiled child, but the child's life is at stake, and it is well to impress that fact on the parents, even though the child may feel and look well. The presence of endocarditis means serious danger, which may be averted by prolonged rest in bed. Sleep in heart disease is of great importance. We must obtain it even if we have to resort to the use of drugs such as codeine, veronal or trional.

When dilatation appears *nux vomica* or *tr. strophanthus* is used in preference to *digitalis*. Although they have a less powerful influence in strengthening the heart beats, they do not increase the peripheral resistance as *digitalis* does. *Tr. nuc. vomica* with bicarbonate of soda has been greatly recommended of being of value in preventing dilatation.

It is the duty of every physician when a heart lesion is detected in a young child to impress the parents with the importance of the child's future career, to advise against violent exercise, late hours, over-feeding, and of most importance, to prepare that child for a position that would not necessitate great physical or mental strain.

Recognition and Treatment of Some Common Injuries and Diseases of the Eye

By W. O. La Motte, M. D., Wilmington, Del.*

In all eye conditions, examine the eye carefully. A red eye may mean the beginning of many serious conditions. The treatment first adopted largely determines the outcome.

Look for foreign bodies under the lids. In looking for a foreign body on the cornea, concentrate on it rays from day or artificial light by means of a 3-inch lens, and if a foreign body is found, don't remove it with a toothpick and don't rub a cotton applicator over the cornea. Sterilize your spud and with that small instrument remove the foreign body. If the wound becomes infected, it will likely mean impairment of

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vision or loss of sight. Rubbing cotton over the cornea destroys the epithelium and may result in serious trouble. Wash the eye out with boric acid solution or sterile normal salt solution. It is easy enough to find out whether an ulcer is present by using a 2% solution of fluorescein, which stains the ulcer a greenish color. If an ulcer is found use a drop of 1% solution of atropine, bandage, and give the patient an eye wash of boric acid solution.

Lime, (a common cause of burns) and all foreign particles should be removed, which is best done by forcible irrigation of the conjunctival sac with clean water. Some prefer, under these circumstances, the introduction of oil with a syringe into the culdesac, but a syringe is not always present. Subsequently instill oil or sterile vaseline, and if the cornea is much inflamed use atropine to prevent iritis. Ammonia burns are particularly liable to cause panophthalmitis.

In all suspicions of entrance of a foreign body, as a piece of steel, have an X-ray taken and with the exception of glass and wood it will usually be shown, and by Sweet's method its exact location can be found. The wound may close up after the accident and there may be no visible sign of a foreign body present, and the patient may even deny the presence of any such thing. The Haab magnet or one of the smaller ones, such as the Johnson or the Sweet, may be used. In wounds examine the well eye and watch for reddening, failure of vision, deposits on the cornea, any ciliary tenderness; and if any of these be present think of sympathetic disease. Development of inflammation in the sympathizing eye may occur a few days after injury, often it occurs in from three to six weeks but may appear at a much later period. As the disease develops, you find, of course, posterior synechiae, opacities in the vitreous, hyperemia of the retina, etc. In such injuries of the eyes give full doses of mercury, preferably calomel, and sodium salicylate and instill atropine. Also, in sympathetic involvement use these drugs, keep the patient in a darkened room, atropine in the eyes if there is no increase of tension and no atropine irritation, leeches to the temple, and dionin (5%) should be used as indicated.

Iritis and cyclitis seldom occur independently of each other, and the choroid is usually involved even though much change may not be detected. The symptoms of uveitis vary. Look for changes in the iris, as its reaction to light, its color, whether there is obscuration of the clean-cut markings on its anterior surface, and posterior synechiae. Look for ciliary injection, or injection around the cornea, and tenderness in this region. Also examine the cornea for cloudiness and for precipitates of grayish brown points on its surface, and the

aqueous for turbidity. In acute cases there are pain, photophobia and lacerimation.

If syphilis is not the cause of iritis, tuberculosis frequently is. Syphilis is the most common cause, and tuberculosis is a close second. The disease is infectious, metabolic, or toxic. Of course traumatism may be the exciting cause. Rheumatism is a doubtful cause. It may be caused by disturbance in metabolism or absorption of toxins from the gastro-intestinal tract. T. Harrison Butler suggests that because the rheumatic condition may be toxic in origin, and because the relation between rheumatism and iritis is vague, instead of rheumatic iritis it should be called autotoxemic iritis. Many cases of so-called rheumatic iritis are gonorrheal. Uveitis may be a metastatic involvement from pus infections of a sinus, tonsils, middle ear, abscess at the root of a tooth, or from any one of many other places. Gonorrhea is not an uncommon cause, being a metastatic disease usually from the posterior urethra or the vagina and cervix. Gonorrheal iritis may occur a few weeks after the initial infection, or it may be a year, or five years, or ten years, or twenty years, and there may have been no joint involvement whatever. Occasionally it occurs with the gonorrhea. Don't forget that gonorrheal iritis may occur in syphilitic patients. Iritis for the most parts occurs in acquired syphilis, and generally belongs to the secondary stage, making its appearance soon after the first eruptions on the skin. It may not appear, however, until in the tertiary stage. Acute iritis in infants and in children is the result usually of inherited syphilis. Parenchymatous keratitis is dependent upon hereditary syphilis, and is often associated with iritis. Syphilitic iritis may not present any unusual signs to characterize it but there may be found early in the diseases roseola, bright red in color; or there may be present nodules, yellowish red in color, on the ciliary or pupillary border of the iris. The Wassermann test should be made if possible, and also the luetin test. The treatment is the regular anti-syphilitic treatment, and under salvarsan the lesions often surprisingly disappear. In tuberculosis iritis, tuberculosis elsewhere can frequently be demonstrated. There may be associated with it a characteristic tuberculous punctate infiltration of the cornea. The Von Pirquet test is a valuable aid in diagnosis. Don't use the Calmette test. Besides the general treatment, tuberculin has produced many favorable results.

Recognize iritis and uveitis early, and find out the cause, which is not always an easy matter. The seat of the disease may be at the root of a tooth which a dentist can't discover, but a skillful X-Ray man can. It is often advisable for the ophthalmic surgeon to consult a clinician, and vice-versa. And if in doubt why not call in a consultant? The case usually de-

mands constitutional treatment as well as local. Above all don't treat the disease for conjunctivitis as is often done, for it may mean loss of the eye. In case of high tension an operation may be required.

Phlyctenular keratitis is often secondary to phlyctenular conjunctivitis or is associated with it. It is a common disease, usually occurring in childhood and is the so-called "ulcer of the eyes," often mistaken for catarrhal conjunctivitis. In one group of these cases the disease is habitually associated with, if not entirely dependent upon, alimentary disturbances. In another group the condition is tuberculous. It may appear after an attack of measles or some other disease which has caused a previously healthy child to be run down. The children are usually poorly nourished or scrofulous. The phlyctenules or blisters are found usually at or near the limbus and there may be some on the conjunctival side. It is accompanied by pain, photophobia, lacerimation, and local congestion. The disease is usually associated with adenoids and eczema. A rhinitis is always present. If the attacks frequently recur the cornea becomes clouded and superficial blood vessels form on the cornea, producing the so-called phlyctenular pannus. Eight out of every hundred blind youths have been children in this class who have been physically weak or scrofulous or have had scrofulous tendencies. The blisters soon become yellow and break down, forming ulcers. Don't bandage these cases though, unless the ulcers penetrate deeply into the cornea. It is not advisable to use cocaine to relieve the blepharospasm. Atropine is used frequently enough to maintain mydriasis. If there is much secretion use an eye wash. Calomel may be sprinkled into the conjunctival sac once a day if no iodide is being taken. Look after any nasal or postnasal trouble, such as adenoids, and also examine the lacrymal duct. Constitutional treatment is very important in these cases. Fractional doses of calomel may be given, fresh air and plenty of good food are important, and tonics are often indicated. It is very important to eliminate tea, coffee, and pastry from the diet. If there are refractive errors these should be attended to after the acute attack has passed away.

Eight per cent of blindness from all causes and one-fourth of the blindness among children are due to ophthalmia neonatorum. Cases of conjunctivitis occurring in the new-born before the end of the third day are usually gonorrheal. Later inflammations are usually due to the Koch-Weeks bacillus, the pneumococcus, mild catarrh, etc. "Babies sore eyes" or "cold in the eyes" does not always mean that the condition is specific. Derby in a large number of cases studied, found that about 48% were due to other organisms.

The distinguishing features in ophthalmia neonatorum

are the greatly swollen eyelids and conjunctiva, and the profuse purulent discharge. The danger to the sight lies in the corneal involvement. Our greatest salvation lies in prophylactic measures. If there is no doubt there is no gonorrheal infection wash out the new-born child's eyes with boric acid waters; otherwise, wash the lids and instill two drops of a one to two per cent. solution of silver nitrate in each conjunctival sac. Don't make a mistake by using a ten per cent. solution instead of ten grains to the ounce solution. Crede averaged 10.8% cases of ophthalmia, and after using his prophylactic method his cases were reduced to less than 2%.

An inflammation, however trivial it may seem, that appears in the eyes of infants should receive close attention. Gonorrheal infections requires early diagnosis and energetic treatment. Ice-cold compresses may be used in the early stages but cold should be used with care. Often hot compresses are better, particularly if corneal complications exist. The duration of these applications should depend upon the severity of the disease. Irrigate the conjunctival sac every one-half to one hour, day and night. Once a day after cleansing the eye, treat the palpebral conjunctiva and retrotarsal folds by brushing them over with a 2% solution of silver nitrate and then wash away the excess of the drug with normal salt solution. Let the lids then return to their proper position and grease their edges with vaseline. If argyrol or protargol are used, the eye should be kept virtually flooded with it, but don't use any of these drugs to the exclusion of silver nitrate. If corneal haze appears, use one drop of a $\frac{1}{2}\%$ solution of atropine in the eye two or three times a day. If only one eye is affected of course protect the well eye from contamination. Gonorrheal ophthalmia in the adult is treated much the same way. The prognosis is graver than in the new-born.

Corneal ulcers, other than those mentioned, frequently require an examination into the general condition of the patient. Always examine and treat the nose. Touching an ulcer with carbolic acid is often good treatment and dusting on iodoform often works well. Trichiasis, or misplaced lashes which turn in and rub against the eyeball, produce lachrimation, photophobia, opacities, and sometimes ulcers of the cornea. The ciliae are often minute, pale and scarcely visible and the condition should never be overlooked.

In any suspicious cases of conjunctivitis be sure to examine the cornea and iris, for the mistake is often made of treating conjunctivitis for iritis. If argyrol is used, first flush the eye with boric acid solution or normal salt solution, then instill argyrol, then flush again, and then instill argyrol a second time. Argyrol acts by promoting drainage. One of its most valuable features is its penetrative and expulsive effect.

It is purely mechanical. Nothing is better in treating acute conjunctivitis than the application of silver nitrate solution to the effected parts. Argyrol or protargol is dangerous if put in the hands of the patient to be used. There is a new form of conjunctivitis caused by the frequent use of argyrol. It is always important in affections of the conjunctiva to examine the tear duct.

Glaucoma is a disease that should always be kept in mind, because of the importance, amongst other things, of not using atropine in such an eye.

Strabismus should be treated early by proper glasses, muscle exercise, etc., eighty per cent. of these cases can be cured without operation if proper treatment is instituted early enough and carried out.

Functional headaches are due to eye strain in 75% of the cases.

DISCUSSION.

Dr. P. W. Tomlinson, Wilmington: In regard to the treatment, Dr. LaMotte suggested the application of nitrate of silver solution every half hour, as I understood it. The doctor cannot mean to do that. Will he entrust that to a nurse if she is only what is called "a practical nurse?"

Dr. LaMotte: I do not think there is anything better than nitrate of silver as a local application, applied by a physician, to the palpebral conjunctiva. About 2% solution in severe cases. When it gets better use a weaker solution. Dr. Tomlinson misunderstood me. I spoke of flushing out with water every half hour to hour, day and night.

Meeting of General Medical Board of Council of National Defense

Held In Connection With Dedication of Warden McLean
Auditorium At Camp Greenleaf, Chickamauga,
Park, Ga.

Dedication of the Warden McLean Auditorium at Camp Greenleaf, the military medical school at Camp Chickamauga, Ga., on March 11th, was made notable not only because of the presence of the Surgeon-General of the Army and members of his staff, as well as many distinguished medical men from military and civil life, but also because of the regular meeting there

March 10th, of the General Medical Board of the Council of National Defense, usually held in Washington. About 1,000 doctors, who as Medical Reserve Officers are taking the three months' course, accepted the invitation to attend, extended by Dr. Franklin Martin, member of the Advisory Commission of the Council and Chairman of the Board.

These members of the General Medical Board attended:

Dr. Franklin Martin, chairman; Dr. William F. Snow, secretary; Surgeon-General William C. Gorgas, Dr. Victor C. Vaughan, Dr. William H. Welch, Dr. John Young Brown, Dr. John G. Clark, Dr. Thomas S. Cullen, Dr. Edward P. Davis, Dr. William D. Haggard, Dr. Jabez Jackson, Dr. Edward Martin, Dr. Charles H. Mayo, Dr. Stuart McGuire, Dr. John D. McLean, Dr. Hubert A. Royster.

Introduced by Dr. Martin, Surgeon-General Gorgas said he knew of no more important work than the activities being developed at Camp Greenleaf; that the necessity of military medical training is obvious; also that on a visit to England five years ago, he learned that the great developments in the English system had been forced by the necessities arising during the Boer War; so, he said, the United States military medical service is being developed by the exigencies now confronting us and would continue after the war. He said he gained from the British service ideas of value for his administration.

Dr. William H. Welch read a statement giving illuminating figures as to the status in the Army and Navy. Men enrolled in the Medical Officers' Reserve Corps, and recommended to the Adjutant-General's office totaled 21,824, of whom 17,313 have accepted their commissions. Of 5,378 recommended in the Dental Reserve Corps, 5,086 have accepted. Of 1,067 recommended in the Sanitary Corps, 865 have accepted. Of 152 recommended in the Ambulance Service, 138 have accepted. There are 844 officers in the Naval Medical Corps and 103 in the Naval Dental Corps. There are 827 medical and 199 dental officers enrolled in the Naval Reserve Force. There are available in the Naval Medical Reserve Corps, retired officers, acting assistant surgeons and national naval volunteers, naval militia and coast guard, 284 men. Total of officers available for active naval service are 2,257. There are 207 chief pharmacists and pharmacists, 7,000 hospital corpsmen in the regular service and 1,000 in the reserve, making a total available for active service in these branches of 8,207. In February there was an exceedingly satisfactory decline in the admission rates for communicable diseases, as well as for all causes. In the force afloat, the situation as to pneumonia and cerebro-spinal fever is very satisfactory. Scarlet fever has been slightly more prevalent than usual but in no sense epidemic; a very satisfactory decrease in measles; mumps continues as heretofore. In the fleet there were 1 case of cerebro-spinal fever,

20 of German measles, 35 of measles, 167 of mumps, 26 of scarlet fever, 43 of pneumonia, lobar and broncho. Health conditions afloat are highly satisfactory.

Dr. Martin, in expressing the regrets of Surgeon-General Braisted, of the Navy, who was unable to be present, said: "I was in Admiral Braisted's office one morning and found him getting reports by telephone from his various naval stations. From 8.30 to 10.30 o'clock every morning he receives these reports, and gives instructions, thus keeping in constant touch."

Before introducing Passed Assistant Surgeon C. P. Knight, of the United States Public Health Service, who reported in the absence of Surgeon General Blue, Dr. Martin read the following telegram received from General Blue:

Washington, D. C., March 9, 1918.

"Dr. Franklin Martin, Chattanooga, Tenn.

"Request that you give publicity to the fact that Public Health Service is greatly in need of the services of competent sanitarians, particularly medical officers, sanitary engineers and scientific assistants. Salaries vary from \$1,800 to \$2,500 per annum. Applicants should address Surgeon General, United States Public Health Service, Washington, D. C., stating in full experience and training which they have had.

"Blue."

Surgeon Knight's report summarized the good work done under his direction since September, 1917, in the five mile zone around Chickamauga Park, a zone having 100,000 population, including 60,000 in Chattanooga. Concrete results included: Inspection of 375 restaurants, of which 148 complied with the regulations; 39 barber shops, of which 29 have been furnished card indicating full compliance; anti-fly campaign; examination of 2,500 employees of restaurants, barber shops and dairies, 3 per cent. being dismissed because of having communicable disease; complete survey of 3,000 rural homes, accompanied by educational talks resulting in orders for installation of sanitary privies; complete survey of private water supplies; inspection of all industrial plants, with corrections under way; submission of fuller reports by physicians, and all reported cases being tabulated and investigated; inspection of all dairies; pasteurization of about 30 per cent. of milk supply; eating establishments compelled to serve pasteurized milk; thorough medical inspection of Chattanooga schools and intensive rural school surveys recommended; providing Chattanooga with full time physician and 6 Public Health Nurses by the U. S. P. H. S.; establishment of unit for treatment of venereal diseases; conference with Attorney-General of Tennessee which led to Governor Rye's order to Chattanooga Board of Health to proclaim venereal diseases a menace to the civil and military population and directing it to make regulations for control in co-operation with the Provost

Marshal, and steps under way to make this a State-wide campaign; and introduction and passage of ordinances in adjacent counties providing sanitary sewage disposal. Lieutenant-Commander Knight has been made a deputy health officer by county and city authorities.

Dr. William D. Haggard, of Vanderbilt University, read a statement for the Red Cross which showed that there are 20 base hospitals on active duty abroad and 14 others mobilized of 19 certified as ready for immediate service. Distribution of sweaters to soldiers and sailors, and all Red Cross sources totals at least 1,250,000. Authority for Red Cross work within camps has been conferred by an official order signed by the Secretary of war. Contracts for convalescent houses in four camps have been let and others will soon be signed. Twenty-seven sanitary units co-operated with federal and state authorities in February in 17 different states. The four laboratory cars, "Reed," "Pasteur," "Lister" and Metchnikoff, have been turned over to the Army Medical Corps. Venereal clinics are now in operation in 17 camp cities.

Major William F. Snow, reviewing the work of the committee for civilian co-operation in combating venereal diseases said that military medical advisors have been providing for state Boards of Health, municipal clinics are being placed, and an excellent moving picture film, "Fit to Fight," has been prepared to be shown at the camps as an educational measure.

Major Edward Martin, reporting for the Committee on States Activities, told of co-operation with the state societies in various ways. Reporting for the Editorial Committee, he mentioned the six manuals on medical military practice, all of which have been approved by the Surgeon General's Office.

For the Committee on Surgery, Dr. Charles H. Mayo told how data on 21,000 physicians had been gathered and placed on cards convenient for the ready selection of individuals and groups suited for any given task, a duplicate set of which cards has been prepared for the use of the Surgeon General's office in France. Dr. Mayo emphasized the need of reconstructing wounded men, not only for field service, but also for labor after the war, inasmuch as the usual tide of immigration has ceased. Citing the many Government activities in which medicine enters, he said these relations, he believed, could be co-ordinated in no way except by having a medical man as a Cabinet Officer. He closed with this plea for recognition of medical military men:

"Medical men must have adequate rank. They are entitled to it. For it is not as if they were at work in the military service doing work to which they are new and unaccustomed. They are working in the line to which they have given their lives. They can't do their best unless they have adequate recognition and rank."

In the absence of Miss M. Adelaide Nutting, Chairman, Miss Ella Phillips Crandall, Secretary, reported for the Committee on Nursing. The total nurses enrolled to date are 18,344, of whom 10,000 have enrolled with the Red Cross since April 6, 1917. The Red Cross had supplied the Army with 6,220 up to March 1, and 1,000 to the Navy and Public Health Service. As insufficiency of nurses in December was due in some camps to lack of housing accommodations, and in others to the fact that a larger quota had not been called for, the Committee recommended to the Surgeon Generals of the Army and Navy that suitable accommodations be provided in adjacent towns where necessary; that there be a quota of not less than one nurse to six acutely ill men; that a reserve of 25 above the prescribed quota be stationed at each hospital; that Miss Anne W. Goodrich be assigned to inspect military and naval hospitals, and that Superintendents of three-year training schools graduate the 1918 classes early. These recommendations received unanimous endorsement of the Executive Committee of the General Medical Board, the Surgeon Generals and the Secretary of War, since which time all demands for nurses have been met. The committee is continuing its campaign to attract young women into training schools and is co-operating in the courses to be given at Vassar College this summer for young women who shall have registered for entrance to a graduate school of nursing in October, these women then being eligible for graduation in two years instead of three. Appeals to training schools and professional registries, together with the Red Cross campaign for nurse enrollment, will, the committee believes, readily provide the 5,000 additional nurses who, it is expected, will be required by June 1, and that the total of 37,500 graduates will be furnished as needed. The committee is seeking relative rank as recognition for Army and Navy nurses, they having all been provided for in the War Risk Insurance Law through the committee's efforts.

Miss Crandall, also reporting for the Sub-Committee on Public Health Nursing of the Committee on Hygiene and Sanitation, told of an experiment in two states in co-operation with the Food Administration whereby Public Health Nurses are to have special instruction in food economics.

Dr. Jabez Jackson, of Christian Church Hospital, Kansas City, Mo., spoke of the need of nurses to take the place of experienced nurses who have gone into military service, saying that 12 out of 15 nurses had gone from one hospital in his city. He advocated special attention to nurse apprenticeship in hospitals.

Introduced as president-elect of the American Medical Association, Dr. Arthur Dean Bevan expressed the confident belief that, whether the war lasts three years or five years and requires 3,000,000 men or 5,000,000 men, the medical profession will continue to stand by "until the job is finished." He said: "It is

the one business of the American Medical Association to educate the profession to realize the extent of the work before it. At our great meeting in June, I should like to have back with us such men as Osler and Dupage to tell us at first hand something of their work and the need for such work as theirs on the other side."

Major John D. McLean told of the progress of the plans for the Volunteer Medical Service Corps, reading the conditions of membership. This body will be open to reputable physicians ineligible to the Medical Officers' Reserve Corps because they are over the age of 55, on account of physical disability, or because of necessity for home service, or other good reason. "An organization of the doctors at home to do a something when there is a something to do" was the way Dr. McLean summarized the function of this new organization which will act when called upon by the Surgeon Generals of Army, Navy or Public Health Service. He emphasized the fact that this organization "will not protect slackers at home." Dr. McLean exhibited an attractive design proposed for insignia.

Lieutenant-Colonel Victor C. Vaughan, reporting for the Committee on Legislation, told of the request of the Army medical officers for higher rank and greater authority, and of the Owen-Dyer Bill (S. 3748 and H. R. 9563) now pending in Congress. He cited instances which he said indicated need for greater rank, and then read the following letter from President Wilson to Dr. Franklin Martin, endorsing the bill:

March 5, 1918.

"My Dear Dr. Martin:

"I read very carefully your memorandum of February twenty-seventh about the rank accorded members of the Medical Corps of the Army and have taken pleasure in writing letters to the chairmen of the Military Committees of the House and Senate, expressing the hope that the bill and resolution may be passed.

"Cordially and sincerely yours,

"Woodrow Wilson."

"Dr. Franklin Martin,

"Advisory Commission

"Council of National Defense."

The dedication exercises on Monday morning, March 11, were attended by a throng which filled the auditorium to overflowing. On the stage was a notable group of army medical officers, with a sprinkling of civilian doctors of national and international fame. Lieutenant-Colonel Roger Brooke presided. Those on the stage included: Surgeon-General William C. Gorgas, Brigadier-General J. B. Erwin, in command of Camp Forrest; Colonel Henry Page, Dr. Franklin Martin, Member Advisory Commission, Council of National Defense, and Chairman

General Medical Board; Colonel E. L. Munson, Lieutenant-Colonel V. C. Vaughan, Lieutenant-Colonel William H. Welch, Johns Hopkins University Medical School; Major Charles H. Mayo, President American Medical Association; Dr. Arthur Dean Bevan, President-Elect American Medical Association; Dr. Edward P. Davis, Philadelphia; Major John D. McLean, Major Stuart McGuire, Major George E. de Schweinitz, and many others.

After music by the Camp Greenleaf orchestra and invocation by Bishop Thomas F. Gailor, Episcopal Bishop of Tennessee. Dr. John G. Clark, of Philadelphia, made the speech of formal presentation of the \$10,000 auditorium on behalf of Mrs. Wm. McLean, whose son, Warden McLean, while in the officers' training camp at Ft. Oglethorpe, was accidentally killed. Colonel Henry Page, who, since his graduation from the University of Pennsylvania School of Medicine in 1894, has been continuously in the regular army and whose efficient untiring efforts have transformed the site which in 1898 was the dumping ground for the Chickamauga Camp, made the speech of acceptance. He said it is his ambition to have here a great postgraduate training camp, and that he hopes to see the temporary buildings replaced by permanent structures.

He was followed by General Gorgas, who argued convincingly for military training for medical officers. He said that notwithstanding handicaps, the present American Army has established a sanitary world's record, for it has cared for 1,000,000 men and the death rate is 10 men per thousand, whereas Japan, during the Russo-Japanese War was deemed to have accomplished a marvel when she kept her death rate down to 20 per thousand. "This is but the beginning of Camp Greenleaf," he said. "This probably will be the focus of our medical activities." He said that Camp Greenleaf, located in the geographic center of 450,000 troops in training, seems the logical location for the one great medical training ground, with accommodations there possibly for 40,000 men, trebling its present capacity. He expressed a wish that the Council of National Defense might interest itself in such a project, and he said: "From past experiences I am sure of their interest."

Brigadier-General J. B. Erwin, the Commandant at Camp Forrest, adjacent to Chattanooga, in a happy speech indicative of the present cordial co-operation of the line officer with the medical branch of the service, evoked enthusiastic applause when he advocated a detention cantonment for the "laundering" of recruits before they are allowed to mingle with men in camp—thus decreasing the chances of mumps and measles, diseases which, he said, are certain to break out wherever bodies of men are gathered in camp or barracks.

Lieutenant-Colonel Victor V. Vaughan recalled a visit to

Berlin in 1907, and a talk with Wassermann, the German medical authority, in which the latter expressed a fear that the 50,000 soldiers quartered in Berlin and the other like units in other cities indicated that "some day" Germany's military leaders would plunge that country in war which might mean the dismemberment of the empire. Dr. Vaughan expressed the hope that some day he might walk through the streets of Berlin and see flying from public buildings the flag, not of France, nor of Britain, nor of the United States, but of the German republic.

Dr. Vaughan, reverting to conditions at Chickamauga as he found them in 1898, when there was not a single microscope nor test tube in the camp, contracted those conditions with the fact that a medical camp has here been established. He contracted the attitude of the line officer of those days with the work-together spirit of today.

Dr. Edward P. Davis of Philadelphia, praised the spirit of the doctors in training, and reminded the audience that physicians really entered the profession of war when they became medical students. "You are soldiers by inheritance and training," he said.

A review in the afternoon of the 12,000 men in the various medical and sanitary units, with a field hospital demonstration, had a dramatic setting. From the knoll overlooking the parade ground from the east, several score interned Germans, ranged behind the wire of their stockade, viewed the spectacle, while on the western side of the field was an immense crowd of civilian visitors who came by automobile and trolley. Well in their rear, towering high above, rose historic Lookout Mountain.

The Warden McLean auditorium building is situated in the center of Camp Greenleaf. Besides the main assembly hall there are several smaller rooms, including orthopedic museum, library and reference room, lecture rooms, study rooms and office. Since the opening of the camp, 4,000 officers and 20,000 enlisted men have been trained and sent to duty abroad or to instruct at other camp.

PERSONAL.

Announcement has been made of the marriage on March 3rd of Lieut. E. Harvey Lenderman, M. R. C., U. S. Army, to Miss Myrtle H. Kates, of Wilmington.

Dr. Willis Linn, formerly of Wilmington, is at present located at Batavia, N. Y., where he is a captain in the newly-organized State Constabulary. Dr. and Mrs. Linn are well remembered in this city.

Treasury Department, United States Public Health Service,
Washington.

April 5, 1918.

The Editor, Delaware State Medical Journal, Wilmington, Del.

Dear Sir:

In view of the reports in current medical literature of untoward results from the use of arsphenamine and neoarsphenamine, I have to request that you give publicity to the statement that it is requested that samples of any lots of these arsenicals which have shown undue toxicity be forwarded to the Hygienic Laboratory for examination.

In sending these samples it should be ascertained that the lot number is the same as that of the ampoules used on patients. The samples sent should, if possible, be accompanied by a brief note stating the approximate body weight and age of the patient, the dose and dilution of the drug given, the symptoms and result; that is, whether fatal or not.

Respectfully,

G. W. McCoy,
Director.

ASSOCIATION NEWS.

Hotel Headquarters for the Chicago Session.

The following hotels have been tentatively designated as general and section headquarters for the Chicago Session, June 10 to 14, of the American Medical Association:

General Headquarters: Hotel Sherman, North Clark and West Randolph.

Practice of Medicine: Hotel Morrison, 83 West Madison.

Surgery, General and Abdominal: Auditorium Hotel, 430 South Michigan.

Obstetrics, Gynecology and Abdominal Surgery: Congress Hotel, South Michigan and Congress.

Ophthalmology: Hotel LaSalle, LaSalle and West Madison.

Laryngology, Otology and Rhinology: Hotel LaSalle, LaSalle and West Madison.

Diseases of Children: Congress Hotel, South Michigan and Congress.

Pharmacology and Therapeutics: Auditorium Hotel, 430 South Michigan.

Pathology and Physiology: Auditorium Hotel, 430 South Michigan.

Stomatology: Congress Hotel, South Michigan and Congress.

Nervous and Mental Diseases: Blackstone Hotel, South Michigan and East Seventh.

Dermatology: Blackstone Hotel, South Michigan and East Seventh.

Preventive Medicine and Public Health: Auditorium Hotel, 430 South Michigan.

Genito-Urinary Diseases: Auditorium Hotel, 430 South Michigan.

Orthopedic Surgery: Congress Hotel, South Michigan and Congress.

Gastro-Enterology and Proctology: Auditorium Hotel, 430 South Michigan.

Scientific Exhibit, Registration Bureau, Commercial Exhibit, Information Bureau and Branch Postoffice: Hotel Sherman, North Clark and West Randolph.

Committee on Arrangements.

The Local Committee on Arrangements for the Annual Session of 1918 to be held in Chicago, June 10-14, is actively engaged in perfecting plans for the comfort and entertainment of the Fellows of the Association and their guests.

All correspondence with the Local Committee on Arrangements or with any of its subcommittees should be addressed to 25 East Washington street, Chicago.

Clinics.

The chairman of the subcommittee on clinics, Dr. Charles F. Humiston, announces that there will be a series of clinics for the Fellows of the Association on Thursday, Friday and Saturday, June 6, 7 and 8, and on Monday and Tuesday, June 10 and 11. Further announcements regarding the clinics will appear in these columns from time to time.

Alumni and Section Dinners.

Alumni and section dinners will be held on Wednesday evening from 6 to 8 o'clock so as not to conflict with other events which are being planned. The chairman of the subcommittee on alumni and section entertainment, Dr. J. H. Stowell, announces that his committee is co-operating with officers of alumni associations in arranging for reunions. The committee desires, also, to assist the officers of those sections which desire to arrange for section dinners.

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Report from April, 1917, to April, 1918

IN MEMORIAM DR. FRANCIS L. SPRINGER

By P. W. Tomlinson, M. D., Wilmington

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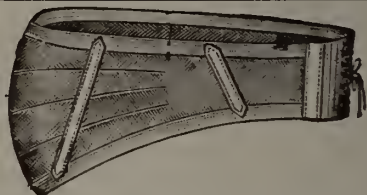
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Editor

DR. W. EDWIN BIRD

907 Delaware Ave.
Wilmington, Del.

Business Manager

DR. J. W. BASTIAN

915 Washington Street
Wilmington, Del.

Assistant Editor

DR. T. H. DAVIES,

Marshallton, Del.

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EDITORIAL

In the Journal of the American Medical Association for June 1, 1918, there appears a list of all the physicians in the United States who have left civil practice and entered the Army or Navy, except those in the regular Medical Corps of either service, those who have been commissioned but who have not yet accepted, those who have applied since early in May, and contract purposes. According to this list, Delaware has contributed but 12.6% of her physicians to the service, while the percentage required to maintain our armed forces is 21. It is time we were up and doing. Many who have hitherto held back till they felt they were really needed, should volunteer now. Some few, with physical disabilities, may now enter, since the new requirements, (P. M. G. form 75) just received, are less strict in many details. Certainly, the time is soon coming when the man who is holding back for mere gain—the professional profiteers—will be forced to enter the service or else be ostracized. Arizona leads all states, with 23% of her physicians in service. Our neighbors, too, are doing well, viz—Maryland, 17.8%; Pennsylvania, 17.5%; New Jersey 17.0%. To catch up with them, Delaware will have to contribute another 5% of her 254 physicians, or 15 doctors. We now have a total of 32 in service, and if we are to ultimately give our full 21%, we must have 32 more. Let each one who is not now in the service think this matter over seriously. We do not wish to see a draft made upon the doctors, yet it *must* come if an insufficient number volunteer.

Below we give the list of Delaware physicians who have accepted commissions:

Kent County—Dover, W. C. Behen; George I. McKelway. Harrington—Joseph Brinlhurst.

Sussex County—Bacous, Walter A. Bacon. Delaware Breakwater, George C. Hart. Laurel, John R. Elliott. Lewes, Rich. C. Beebe. Milford, William Marshall, Jr., William R. Pierce. Seaford, H. M. Manning.

New Castle County—Centerville, John W. Crossan, Delaware City, Walter W. Ellis. New Castle, Robt. R. Roth. Newark, John H. W. Ayers.

Wilmington—Jos. M. Barsky, Bruce H. Beeler, Ira Burns, Edward T. Crossman, Jas. A. Draper, Abram J. Gross, Mark B. Holzman, B. Allen Jenkin, E. Harvey Lenderman, Bernard J. McEntee, Herman S. Miller, John H. Mullen, J. B. Rutherford, M. I. Samuel, Jas. G. Spackman, Wm. H. Speer, Victor D. Washburn, H. W. Howell.

We wish every physician would ask his Senator or Congressman to send him a copy of the bill introduced (H. R. 12177) by Mr. John F. Miller, of Washington, the so-called man-power bill. It aims at the control of venereal diseases, but its provisions seem, upon a cursory reading, rather drastic. Please familiarize yourselves with it, and write Mr. Miller your views. Do it now, before it is too late. We may discuss the bill fully in a later issue of this Journal.

Unusual Surgical Conditions*

By John Palmer, M. D., Wilmington.

I have no set paper but am going to report a few of the unusual cases that it has been my experience to meet at the Delaware Hospital during the past year. The first case I will report is that of a young man brought into the hospital in the evening, unconscious, having fallen from a cherry tree. The symptoms appeared to be those of concussion of the brain. He was put to bed at rest. In the morning he began to clear up as far as the brain symptoms were concerned, but began to show symptoms of fairly active shock. In a little while it appeared to be as though he were having some internal hemorrhage. He

* Read before the Delaware State Medical Society, Middletown, Oct. 9, 1917.

got very white, the pulse very rapid. He wanted to have all done for him that could be. He was away from home, did not want his people to know that he was hurt and although only nineteen years old we took the responsibility of performing an operation on him. I do not know how it is down in this part of the State when an operation is attempted on a patient under age, but with us if an operation is attempted, sometimes the people want to say something about it. However believing that there was some hemorrhage into the abdominal cavity, we attempted a laparotomy. The first thought was the kidney. There were no hemorrhages from or about the kidney, although the abdominal cavity was just full of loose blood. Then we explored the region of the liver; no hemorrhage there. Then we thought perhaps there might be hemorrhage about the stomach, possibly some of the deeper blood vessels there. That was all right. In going about the region of the spleen we discovered that was the place the bleeding was from. The whole top of the spleen was just as though it had been squeezed off and although the time we operated was some eighteen hours after the original hurt it was still bleeding under the clot. The blood was all cleared out from the abdominal cavity and it was packed. We could not attempt to sew all of it, it was so friable. The notion came whether or not to take the spleen out, but it was thought not advisable under the present conditions, and was packed with gauze packing. In six days we took the packing out and the boy made an uninterrupted recovery. We will say that the only external marks of injury in that boy was a little abrasion of his forehead where he was struck a slight blow after falling from the tree. There were no marks on the abdomen and we report this as being unusual from the power of the shock knocking the top off the spleen.

The next case I will report is that of a pancreatic cyst. This was a man of 30 years old, admitted to the hospital with some symptoms. It was first thought from the symptoms he was suffering from that there was some chest involvement. He had some cough, some bulging between the ribs. He had been aspirated, but it had proved a dry tap. He was in the hospital under study for possibly ten days. His abdomen began to protrude with more especial reference to the upper abdominal region. He became very sick and very shocked. We thought in this case that it would be well to do an exploratory operation. He had what we would call "surgical abdomen" and we prepared him for operation. There were two or three guesses as to what the disturbance was. Some guessed it was a disturbance of the pancreas, others to possibly just abdominal tumor from some cause, not knowing what, and others it was pleural effusion. On opening him in the middle line below the breast-bone fortunately we got into the cavity of what was a pancreatic cyst. There were at

least five quarts of pancreatic fluid and debris that came out. You could get your hand up into the diaphragm in the region of the heart. It felt as though there was only tissue paper between your finger and the apex beat of the heart. The cavity was mopped out. The region of the spleen appeared all right. He had a good wall. That was packed with an unusual quantity of packing. That man did very well for about three weeks. By that time we had the greater part of the packing out, but the fluid had kind of dammed back somewhat and damming back he appeared to get a little systemically affected. He had fever and chills, and was put back to bed. In the meantime, five weeks after the operation, he was practically well and the sinus had healed up. We took a piece of the man's own fat and put it in some of the fluid that was drained out and it absolutely digested the fat, proving that this fluid was pancreatic fluid.

There was another interesting case, a boy of fifteen years old, brought into the hospital with a gunshot wound in the abdomen, suffering some little from shock. He was sent in without his parents knowing where he had come from. He came from Jersey, Carney's Point. Two boys had been fooling with a pistol and the pistol went off. An interesting sidelight was thrown on this story by the patient, after getting well. He said "Well, the other fellow and I were looking after the same girl and he just shot me." We had to wait about ten hours before we could get the consent of this boy's parents to the operation. In that time he had lost considerable ground, but we still thought it advisable to operate. By the way, an x-ray picture had been taken in the meantime. The bullet appeared to be in front of the posterior part of the pelvis. On opening him up we discovered one wound into the small intestines just above the ileocecal valve. Considerable fecal matter had seeped out into the general abdominal cavity. The greater part of that had gotten around the appendix. The appendix was being involved in an acute inflammation from the irritation from this discharge. The wound was sewed up in the small intestine. He made an uninterrupted recovery. About two weeks afterward he had another x-ray picture taken, without finding the bullet. Our feeling is that there being only one opening, that the bullet was lost in the intestines and passed off.

The next case is that of a man and his wife who had gotten into Wilmington after night. They had no money to go to a lodging house and so lined up in a doorway. During the night the man met a policeman who took him to the police station. Sometime in the night the old man—about 50 years of age—complained of intense pain in the stomach. The police officer thought, I expect, "He wants a drink of whiskey," but they thought they would take him to the hospital and suggested to the intern that was about what he wanted, but the intern felt a

little apprehensive and said, "You had better let him be here." It so happened that I was in the hospital operating on another case and looked at the man and concluded he had a perforating ulcer. We finally made a diagnosis in this case of ruptured gastric ulcer. We told the police officer to let the man stay there and as soon as I could, about half past one in the morning, I opened the man's abdomen, without any trouble found the ulcer which happened to be posterier. There were some little adhesions, at least the stomach was a little hard to get down to. We sewed the ulcer up. There had been so much gastric contents that had seeped out that we thought it prudent to make pretty free drainage, which we did, but that old fellow inside of a week was able to eat full diet. He had a previous history that for about twenty days he had not eaten anything, practically. He had been sick at his stomach practically only during the early evening that he had the intense pain.

The next case we are about to report is of special interest. A man had been complaining for two years, with a doctor attending him and making the diagnosis of appendicitis. He was sent into the hospital as an emergency case. The doctors at the hospital agreed with the diagnosis and thought he ought to be operated on. He had a rather low leukocyte count, only about 9000, but was particularly sensitive over the McBurney point and pretty sick generally. So he was operated on, the lower part of the appendix, which was a good deal inflamed, had two small enteroliths in it. The upper part of the appendix, the bowel end, was almost obliterated. At the time it was noted that about six inches of his ileum was quite red and considerably swollen. The notion was held that perhaps he was going through typhoid infection. He was put to bed, came out of his ether first rate, his temperature doing down to normal. He went through the usual convalescence from that kind of case of appendicitis, but his temperature kept doing from 99 to 101½ each day. In spite of that he felt good and having a late report of a positive Widal reaction, we even had him on full diet. He left the hospital and was gone for two weeks. During that time he was going about town and feeling particularly good. In fact he was considering going back to work as an engineer. Two days before going back he ate a big dinner of boiled cabbage, got very sick at his stomach with acute indigestion. He had active fever and was pretty sick. He was sent back to the hospital with all the ear-marks of a very active recurrent case of typhoid fever, with nervous manifestations. A man who had never had a drink of liquor in his life yet looked almost the decided picture of a man with delirium tremens. He is now in about the third week of this performance. The temperature now has gone down and he in fact is getting well.

The last case that I wish to speak of is a case of avulsion of

the scalp. This was a young girl, 15 years old, an employee of a morocco factory. She had unusually long hair and a few minutes before quitting time she concluded that she would like to re-arrange her hair. On taking it down the hair caught on the revolving shaft and the hair staid to the shaft and she dropped to the floor. It took down the side of the face through the neck to a prominence at the cervical region and tore the skin in her neck, just missed the ear and took the skin off both eyebrows down to the place of beginning. The ear was entirely gone. The periosteum was pretty well stripped. She was bleeding and it so happened that I got the case pretty soon after it occurred, perhaps five or six minutes. She was bleeding profusely from a number of places in the scalp. These were all caught up. She was taken to the hospital and some of this loose periosteum and loose pericranial tissue was drawn up towards the forehead. The ear which was torn away from the side of the head was still good and was drawn up and sewed to its proper position. Part of the neck was drawn up to the right where the head comes to the neck. There was some little sloughing, and over an area about as big as a gold piece would be, the bone was entirely denuded. It looked as though the bone itself had become devitalised and we feared we would have to curette the bone to start up some granulations from the middle tissue of the bones. Finally Nature came in. It is 115 days since this occurred. She is skinning pretty well about the external auditory canal. The skin is pretty well up the neck itself, almost to the crown in the back, the vault of the cranium needing still to be covered. You might wonder that we did not graft it. There did not seem to be sufficient good deep tissue there. After all this time you might think that the child was going to get well, being only about fifteen years of age. In the early part of the performance, knowing that her scalp was all gone, she did not want to live. She said "What kind of a thing will I be on the street?" I said, "We can fix you up." Now she is better and likes the idea of being more or less prominent. I think she is going to get well with a pretty good skin over her scalp.

DISCUSSION

DR. WILLIAM V. MARSHALL, Wilmington: I think you will all agree with me that Dr. Palmer's cases have been unusual not only from the cases they were, but unusual from the results obtained. Practically all of them as far as we see now either have recovered or are on the road to recovery. Take, for example, the case of ruptured spleen. Up to 1890 no cases of ruptured spleen were operated on and the mortality rate at that time was 84.6 per cent. The operation of choice is supposed to be a partial or total splenectomy. But after all in operating you are not after mechanically successful operation. What we are after is result and

I think Dr. Palmer obtained the result in practically all of these cases. However take the case of pancreatic cyst, it would have been very interesting so far as the operation was concerned to have learned whether the pancreas was actually destroyed. Before operating this could be done by giving salol in capsules and finding salicylic acid in the urine. It might have helped in clearing up the diagnosis. So far as the cause is concerned it would be interesting to know just what caused the pancreatic cyst. In that case the spleen was also involved in the cyst. It would be interesting to know what was the cause. There was no history of injury so far as we could learn. The man was an Italian and it was hard to get a history of any sort from him. Of course the gall-bladder as a rule is the seat of most pancreatic trouble and it would be very interesting to know whether there were any stones in the gall-bladder or whether he had any profound disturbance. The cyst was so large that the gall-bladder could not be explored very well. The fact that the man made an uninterrupted recovery is evidence that he had all the gall-bladder necessary. As to the case of appendicitis following gunshot wound it only goes to prove that where there is a possibility of the appendix getting into trouble it will certainly do so. I treated a case four years ago that came from Clayton, a colored man shot by an officer, one bullet entering at the umbilicus. I found fecal matter scattered over the intestines and the appendix had also been shot off. The appendix was practically in its normal location although entirely severed from the rest of the gut.

I saw most of these cases of Dr. Palmer's and people do not, I think, understand how remarkable they were. It would be interesting to hear any questions they would like to ask Dr. Palmer upon them. In reference to the pancreatic cyst the only cause I think of is some sort of traumatism that the man did not remember. There must have been some injury to the splenic artery or he would not have had any spleen involvement. We have not been able to follow the history of this man to see whether he is well today.

DR. JAMES BEEBE, Lewes: Was there a study of this urine made?

DR. JOHN PALMER, Wilmington: No special study was made of the urine. The routine examination was negative.

DR. ROBERT B. HOPKINS, Milton: I would like to ask Dr. Palmer a question in regard to the boy with the injured spleen and hemorrhage into the abdominal cavity, whether the boy had excessive pain or not. Did he mention about the young man having had pain but rather more of shock?

DR. JOHN PALMER: All shock. No pain at all.

DR. W. E. BIRD, Wilmington: I would like to ask if Dr. Palmer examined for echinococcus in the case with pancreatic cyst?

DR. PALMER: No.

On Pneumonia*

By J. W. Bastian, M. D., Wilmington

It is said that the less that we know about a given disease the more we talk or write about it. If that is a fact, as it probably is, the complete knowledge of pneumonia, especially the treatment of it, is not yet at hand. Frankly speaking, it is a self-limited disease for which we have, so far, found no specific. The most promising treatment appears to be a serum which is still in an experimental stage. Great headway, however has been made during the past four or five years in finding a specific serum.

Investigators at the Rockefeller Institute and elsewhere have determined four types of pneumonococci and the method of determining the type is now being done in quite a number of the larger hospitals.

According to Cole, the mortality in types I and II is from 25 to 30%; those due to type III about 50%; while those due to type IV will only average from 10 to 15%. From these figures one can readily see the advantage of knowing the type of infection, both from a point of prognosis and treatment. To be able to make this differential diagnosis one must, of course, have ready access to a laboratory properly equipped to do this line of work.

The general diagnosis of pneumonia is easy as a rule, especially those cases that run the typical text-book course but the irregular cases, and we find quite a number of them, are the ones that require great care. Quite a number of the cases treated at the Delaware Hospital during my service last winter were sent in as "grip," and others as cases of appendicitis and peritonitis. It is not unusual to find cases with such small areas or centrally located areas that it is only by the most careful observations that one is able to make a diagnosis. These things should always be born in mind when we realize the great importance of making an early diagnosis.

Treatment. Absolute rest both mentally and physically is of the greatest importance. After the diagnosis is made we should not disturb the patient for unnecessary examinations of the chest. The nurse should be instructed not to disturb him from his sleep for medicine or to take his temperature, unless some special treatment is indicated. Each patient should be

* Read before the Delaware State Medical Society, Middletown, Oct. 9, 1917.

considered individually, his general makeup, his past habits etc.

All cases should be given abundance of pure fresh air, unheated for grown people, but children and very old people do better in a room kept at about 50 to 60°. Do not forget to have the bottom of the bed protected by placing heavy paper or a rubber blanket under the mattress.

Counter irritations, poultices etc. As there is no direct anatomic connection of the lung tissue with the chest wall, if any effect is obtained it must of necessity be through the nervous system. Consequently I disagree with quite a large number of the profession regarding the use of them in pneumonia. It would be just as reasonable to apply remedies to the abdomen in treating typhoid fever. Counter irritations probably do no harm in pneumonia, but poultices and mud or clay applications do; with them you are going contrary to all reason; they have no hygroscopic effect; they put an extra load on the chest which is already laboring hard; they compress the circulation by mechanically obstructing the venous return, thus favoring edema. Heat from poultices favors and promotes the growth of the pneumonococci and other bacteria, thus favoring empyema. I believe if any local application to the chest in pneumonia is of benefit, it is an ice bag. If it is used it should be placed in such a position that the weight will not interfere with the chest movements, that is, simply rest against the painful area. I have seen the pain relieved within half hour after the use of an ice bag.

Baths and sponging are not popular for relieving high temperature and their effect for good is doubtful, but an ice bag may be applied to the head with apparently good results.

Food. Pneumonia patients should be fed much more liberally than we were taught a few years ago. By keeping them on milk and broth for several days an acidosis is likely to be produced which of itself will cause an elevation of the temperature. Feed them every three hours with such light foods, as cornstarch, well-cooked oatmeal, cream of wheat, rice, barley, etc. If necessary help digestion with taka-diastase or pancreatin.

If acidosis does occur give sodium or potassium citrate or bicarbonate of soda with large quantities of water. We know that all febrile patients do better when the urine is kept free, and alkaline.

The bowels must not be neglected; they should be thoroughly emptied at least twice a day; saline laxatives and saline high irrigations answer the purpose quite well.

Serum. With our present knowledge of serum we are not justified in treating all cases with serum, in fact according to the best authorities we should not use serum unless we have first determined what type of pneumonococci the patient is infected with and then we should use a specially prepared serum.

For a full discussion of the serum treatment I would refer

you to a paper read by Rufus Cole at the A. M. A. meeting in N. Y. and appearing in a recent issue of the Journal of the A. M. A.

Quinine. Solomon Solis-Cohen advocates the use of quinine and urea hydrochloride. He is now giving it intravenously and in rather large doses. He believes it to be a chemical antidote or antitoxine to the pneumonia poison. He however supplements it with other well known remedies.

Digitalis should be used fairly early, and remembering that it is slow in its action, give it in doses large enough for effect. For some reasons which I have never heard explained pneumonia cases will stand and require much larger doses of digitalis than in most other conditions. High fever seems to prevent or retard the effect of digitalis, consequently if the temperature is high give larger doses of the drug, and when it has become effective withdraw it. I have used very little *strophanthus*, as I am afraid of it, but *adonis* makes a fairly good substitute for digitalis. *Spiritus ammoniae aromatica* is a good and quick stimulant. Give it in rather large doses if you expect good results. *Strychnine* also has its place both as a heart and general stimulant. *Camphor*, *caffeine* and *adrenaline* all have their places.

Oxygen. In cases with increasing cyanosis and difficult respiration indicating extensive mechanical encroachment upon the air spaces of the lungs, and failure of the blood to take up sufficient oxygen from the atmospheric air, give oxygen liberally for several hours.

In cases of severe delirium, Musser and Hufford advocate lumbar puncture. They claim that the delirium was promptly relieved by the spinal puncture.

DISCUSSION

DR. H. W. BRIGGS: Dr. Bastian has given us a very well written article covering the subject of pneumonia exhaustively and carefully and he has started out by telling us that pneumonia is due to the pneumococcus, but he tells us that there are four different kinds of this pneumococcus according to the best scientific authorities and the treatment of the disease depends upon the particular pneumococcus. That necessarily limits us as practitioners of medicine, from the fact that unless we have an autogenous vaccine made we are unable so far as the physical symptoms are concerned to determine just what is. Therefore we must cut out the serum treatment which has been suggested. Practically as practitioners of medicine we have but two kinds, the old fashioned lobar pneumonia, which starts suddenly, generally with its chill, rising temperature immediately, going along and running its typical course in 24 to 48 hours, finally concentrating upon some particular part of the lung. As a rule we hope not to have it extend any further. That is our old lobar

pneumonia and a serious pneumonia. Now we are taught that we have a broncho-pneumonia which comes on insidiously, and gradually goes along until it involves the whole lung. The conditions in this are very different. In other words, we have a group of symptoms very different in the two forms of pneumonia, just as distinct as we have in a typhoid simulating pneumonia. Now I agree with Dr. Bastian that until such a time as we shall develop a practical serum therapy, the treatment is purely symptomatic. We must treat our cases according as the symptoms arise and no more definite treatment can be prescribed for any pneumonia, lobar or bronchial, than for any definite case of typhoid from beginning to end. I disagree with Dr. Bastian that it is not much use to put depletants and counter-irritants over the chest. Most of the pneumonia which follows the diseases of childhood, in my experience, has been the broncho pneumonia, a general congestion of the lungs over almost the entire area. In these particular cases I have personally observed and have read articles, that local depletants and local counter-irritants in some way do a great deal of good by lessening the congestion in the lung proper. So far as concerns the distinct lobar pneumonia which you have confined to a certain lobe, when you get through the process of consolidation and finally resolution, I do not think it is of much avail. A point he brought up was the question of air. Now I believe that frequently the laity, together even with the medical profession, associate the idea of air with cold air. There is no reason why a pneumonia patient suffering intensely from all symptoms, should be placed in air that is perhaps down to the freezing point. What is the idea in giving the patient plenty of air? It is to give them oxygen. Why must it be of such a temperature that it is chilling to the inflamed lung? I believe that all pneumonia patients do better in plenty of fresh air, but it should be of such a temperature that it will not discomfort them in any way. They will receive benefit from properly heated air as well as from cold air. I think the Doctor has covered the subject very well, and I hope that the time will come when we will have laboratory facilities to make our tests in such a way that we can determine what to use as a specific, and if such a time comes we will have made a great advancement in the treatment of this as well as other diseases. Until such a time comes treatment must be purely symptomatic, and you must meet conditions as they arise the same as we do in any other condition.

DR. BEEBEE: Is it possible to give a mixed serum?

DR. BASTIAN: They do not seem to give results.

DR. McCULLOM: I believe in the use of counter-irritation over the chest, both in broncho-pneumonia and lobar pneumonia. I am of the opinion that it does good in both cases. As to the use of an ice cap in pleurisy, I rather disfavor this for the rea-

son that it leads to stasis and congestion, and is more liable to lead to more serious consequences, such as empyema. Therefore I do not favor it in pneumonia and pleurisy any more than I do an ice cap in a case of appendicitis. The only time I think an ice cap would be permissible in pneumonia would be in the first 24 hours, as it is in all inflammatory local conditions in which you are tending to prevent more congestion, and it does help in the progress of the disease. After that time it leads to stasis and is a hindrance rather than a help to the condition.

DR. HOPKINS: I want to emphasize the diagnosis between pneumonia and appendicitis. It may seem like a queer affair, but nevertheless there are cases of pneumonia in which it is difficult to make the diagnosis. I remember last winter I was called out in the night to see a little girl who had taken a violent pain in her abdomen, the right side. She had rigidity of the rectus; she had flexion of the legs, she had vomited. She had a temperature of 101° . To all appearances here was a case of typical appendicitis, but on examination I found all the right lung crepitating. Just why a case of pneumonia should be almost typical, as far as the symptoms are concerned, of appendicitis, I cannot explain, perhaps some of the other doctors can. However, in regard to the treatment of pneumonia we still are undecided, as far as specific treatment is concerned, yet my treatment has consisted of elimination. For instance, I do not object, in a man, to giving half an ounce of compound jalap powder. By that we drain the system. I believe we relieve the congestion to a certain extent and while pneumonia is a specific disease, I believe pneumonia is also a mechanical disease. If we can relieve the portal circulation I believe we place the man in a better position for recovery. In other words, if we can eliminate the germ, instead of trying to kill the germ in the system, I think we have gained a great point. During the last winter I have treated about fifteen cases of pneumonia, some were mild, some were rather severe, and I have followed out this line of treatment. Now in regard to the elimination I have used largely remedies that are known to all of you, muriate of ammonia combined with the syrup of ipecac. The question that struck me forcibly from the results I obtained. (I did not lose during the last winter a case of pneumonia.) is this: Does ipecac have any specific effect upon the microbe of pneumonia? In fact, does it have for the pneumococcus? I am not prepared to answer, but I simply throw this out as a suggestion for a possible future investigation. Now we do know that emetin has a specific action upon the amoeba of dysentery. Possibly it may have some effect upon the pneumococcus. One thing at least it does, it keeps the secretions active. The muriate of ammonium has a decided effect upon the secretions also, and I believe the two remedies combined has a beneficial effect in cases of pneumonia.

DR. BASTAIN: In our experience at the Delaware Hospital the last winter we had an unusually large number of pneumonia cases. The greater number of cases were sent over from Carney's Point, and I expected to have a tabulated list of these cases, but Dr. Beeler was called away to the Army and we haven't that. We had between 60 and 75 cases at the Delaware Hospital, and with the cases in private practice, a total of about 100 cases which I treated last winter. In regard to depletants, bleeding during the early congestive stages is advocated by some in place of the poultices. While I have never bled a patient with pneumonia I can see no objections to using it, and there are some men of wide experience who advocate it. Others give as a depletant *veratrum viride*. I don't think it is used very much today, especially by the younger men. Of the fresh air, it has been conceded that patients do better with abundance of fresh air and comparatively cold; that is, hearty robust patients. At the Delaware Hospital, unless there were some contraindications, we put the patients on the porch, and then have hoods on and hands well protected with mittens, and the majority of them after being on the porch for a few hours would request to be left on the porch. If the weather was stormy we tried to protect the bed from extreme drafts of wind by screens, and they were brought into the house if any changes were to be made in the bed or during irrigations. In regard to the ice cap, it is only to be used during the acute pain, which as a rule does not last more than 24 hours. I have never seen bad effects, but I have seen good effects from the ice cap. But I have seen bad effects from patients badly burned. I am reminded of a fakir who was selling some treatment for rheumatism, an external application, and he was selling it wholesale and I said "Does it really cure them?" "No," was the answer, "but it burns like hell and they forget their other pain." And I think that would answer for the mustard plaster in pneumonia. The ice cap is only kept on, as a rule, for the first 24 hours. I am unable to see where the large doses of purgatives would have any particular advantage. If a man has had personal experience with large doses of purgatives he realizes their effect. I think high rectal irrigations are better. I believe it is Henry, of New York, who still uses salt infusions, from one to two pints, under the skin; we can get practically the same effect by throwing it into the bowel. It is less painful to the patient and answers a double purpose by apparently counteracting toxemia and also helping to keep the intestinal tract empty.

The Tuberculosis Situation*

Introducing Dr. F. H. Edsall.

DR. HAROLD SPRINGER, Wilmington: The Tuberculosis Commission of this State has spent approximately \$10,000 to try to educate the people and prevent the spread of tuberculosis in Delaware. I have been secretary of that Commission for some years and have no interest in tuberculosis, excepting from the standpoint of the layman. Some of you have more interest than I have. During that time we have tried various methods, in various ways, to take care of this disease, mostly through dispensaries, trying to reach the patient; sending such cases as needed sanitarium treatment to White Haven, Rush Hospital, or some other place. The Commission has felt that in spite of the amount of money and well-intentioned effort to advance this cause that really very little has been accomplished. We cannot show by figures that the mortality rate from tuberculosis has been lessened in Delaware and only can show that a certain number have been sent eggs and milk, and treated in other ways. Of course that has served a certain purpose, and has prevented spitting on the streets, etc. In the long run we feel that the work has not accomplished what it should. About a year ago we asked the secretary of the National Association for the Study of Tuberculosis to come on and meet with the Commission and about that time we employed a nurse who had been trained along these lines to come here, and she made a report which we tried to have as far as possible unbiased, and she reported that we were accomplishing nothing and the National secretary made certain recommendations: in brief, it was that we practically discontinue the use of dispensaries and the giving out of milk and eggs, and devote as much of our appropriation as possible to educational purposes. Therefore we have discontinued dispensaries, excepting one in each county, and we have employed Dr. Edsall as a field secretary to go out before the State and present the matter before schools and clubs, and in every way possible to have the work of tuberculosis carried out along educational lines. Of course cases can still be sent to sanitariums. We feel the safest thing to do with them is to send them to some sanitarium. Dr. Edsall is just about to begin his work. We are up against two or three difficulties. In the first place we must

*Discussion before the Delaware State Medical Society, Middletown, Oct. 9, 1917.

have the co-operation of the medical profession. It is necessary that the Commission should know the number of tuberculosis persons in the State. The State gives them the authority to make it a reportable disease. We cannot get them to do it. They refuse. If we can, let us get the co-operation of the doctors for Dr. Edsall. There is no possible chance for Dr. Edsall, or anyone else, taking patients. He is on a salary, and I want to introduce him and have him say a few words, and I want to ask the Association to use its personal influence to help us forward along the educational lines, and to report the cases as far as possible to us. We do not want to treat the cases. A lot of the cases that are able to care for themselves we will supply with literature, sputum cups, etc., if necessary; and those cases that require it will be sent to a sanitarium for treatment. It is a subject to which we ought to give our attention, and I hope the Society will back us up in this matter and give Dr. Edsall cordial co-operation. I am not talking to you from the standpoint of a medical man, but purely from the layman's.

DR. F. H. EDSALL, Wilmington: Dr. Springer has given you a brief sketch of what the Commission desires to accomplish in the way of prevention of tuberculosis. It gives me a great deal of pleasure to talk to you this morning. While I am not a native of the State of Delaware, my wife's family have been Delawareans for many generations, and I am really pleased to be a citizen of Delaware at the present time. In the handling of tuberculosis, like all other public health problems, there is a saying which comes to my mind, a legend which is carried by the New York State Department of Health, that public health is purchasable, that any community may determine within well-defined limits its own death rate. Another thing that comes to my mind is that civic authorities put as the first duty of the statesmen the care of the health of the people. This, so far as your Commission is concerned, is our purpose. The method of doing this will be largely educational. Various methods have been tried through the dispensaries in the country in general, or by other means, treatment in sanitariums, educational purely and simply; and a combination of all these various methods and it is hard to get the best results in a disease that is as general as tuberculosis, for in spite of all that has been done to prevent, it is still the Captain of the Army of Death; although hard pushed possibly by pneumonia, the general contagious diseases, and the secesses, it still leads, in most communities, the death rate. In order to control tuberculosis administratively, we have got to know where the cases are. We have got to get as complete a census of the tuberculosis situation as we can get. And getting this we later reach the cases where administrative control is necessary, and possibly help you gentlemen to relieve these cases. The important time to do anything for tuberculosis is at

the earliest possible moment it can be found, and the diagnosis of tuberculosis is not always easy in the early stages, but the average family practitioner is probably fully as valuable in determining cases of this kind as the expert is, from his knowledge of the family history and of the particular individual case. But of course I need not tell an intelligent body of men like this that if you are going to determine a tuberculosis you cannot do it in an off-hand manner. Every patient has to be carefully examined, every patient stripped, and a complete physical examination has to be made, and even then sometimes you will err, as we sometimes do in the practice of medicine. First, the careful diagnosis; then we are going to ask you to report to the Commission directly each of the cases that comes under your observation, or that has been under your observation for any considerable time. The cases wander from one physician to another, so don't worry that you may report a case that has been already reported. That will be checked off in the Commission office. Shortly you will receive postal cards which will have all the necessary data that will be required by the Commission, and we are going to urgently request you as soon as you see a case, or any case you have seen, to enter with separate card and drop it in the mail box. It is up to you then, gentlemen, to aid the Commission, for the Commission alone can do very little to help us to get a census of tuberculosis in the State. I am told that tuberculosis has not decreased, in fact that the influx of people into the State, and by the housing conditions, the figures have increased rather than decreased. If so, it is important to do something to check it, and we are going to see how much can be done. I have been interested to see what could be done by careful, pains-taking administrative control of the disease. It is a part ordinarily of the State Department of Health work, but it does not seem to have been handled by the State Department in this State, and I am interested to see how much reduction can be brought about in the State. Also, improvement will not be sudden. It will be not a matter of months, but of years, before any great reductions can be brought about. I believe with proper administrative control we can do a good deal. As to the cases that occur, the dispensaries are, as Dr. Springer has expressed it, important. Their number need not be great, it dissipates the funds without getting anything of permanent value from them. As to the treatment, even expert treatment is subject to a difference of opinion. Sanitarium treatment seems to be the most modern, but is apparently not so successful as was hoped. I believe at the present time it is probably as desirable a method as we have. There is but one institution in this State where the cases can be handled, at Hope Farm. There have been objections to Hope Farm. I have been over it and on the whole it is conducted fully up to the average of public san-

itariums. It is still a fairly satisfactory place, and the patients receive probably as good care as at any place of this kind. A patient, such as a tubercular case, which is a chronic, long standing case, that is in an institution for any considerable time becomes more or less dissatisfied. No institution is always satisfactory to all the cases, and is unsatisfactory to a good many cases simply because it is an institution. The food, where you have to feed in the mass, causes complaint in some; you cannot make mass feeding please the palate of every individual in the mass. The institution discipline gives cause for complaint to a good many patients, but on the whole, the patients when not in comfortable circumstances, (and that is the majority of tuberculosis patients; it is largely a disease of poverty), are apt to be complaining because of the educational discipline. Through education, through tuberculosis exhibits, through instructing people, through literature and addresses, and proper care of themselves and communities, instructing them in the proper feeding, the care of milk, the care of the home surroundings, short conferences which I hope we will be able to institute in the State, which touch the tuberculosis question in any way, we may in time develop sufficient interest among the public at large and in the medical profession to get results which are worth while, and to place Delaware where it should belong in the control of tuberculosis. These are the methods which we will have to follow. If other things seem to develop which may offer improvement and which can be pushed further through the aid of the medical profession of the State, I shall come to you gentlemen and request you to give us further aid, and to carry out other methods which seem to suggest themselves. I may say that I speak for the Commission that we purpose conducting this work without any intention of favoring any individual or organization in detail. We want to be perfectly fair. We want to use the State's funds in as wise and intelligent a manner as possible, solely with the idea of getting results, and in doing this we cannot make individuals the first concern. We have got to make the good of the State the primary consideration in doing this work. We want to co-operate with the members of the medical profession. I know the difficulties, the lack of official recognition which the physician gets, and I know that the temptation is often strong to get a patient to continue under treatment as long a time as possible, because the doctor feels that he can help possibly and he feels that he is as much entitled to the financial return as any other man is, but the altruistic side of medicine must come into this problem if we are going to get results, and the doctor must be willing to sacrifice something to get results. Medicine never cured a case of tuberculosis, and unless under proper regime, and continuous observation to carry out that regime, you will get very little permanent

results. The essential thing is to get the patient under observation early, and under proper preventive treatment early. If you at any time find anything that may seem unfair, you bring it to the attention of the Commission, and we will correct any mistakes that we may have made in regard to our position towards the profession.

The Relation of Tonsils to General Disease, and The Sluder Method of Extirpation*

By E. R. Mayerberg, M. D.,—Wilmington.

In a paper of this scope it is impossible to give more than a cursory review, as so much has been written on this subject very recently that an exhaustive consideration would require a large treatise.

Yet, in spite of all the current discussions, a great many general practitioners fail to give the subject the attention it deserves, and apparently consider the whole matter a case of ultra-enthusiasm of the specialist and consequently to be taken not too seriously; and because of this attitude the specialist has been slow to speak and very careful and conservative in his claims.

Several men who enjoy the confidence of the entire profession have declared that the tonsil is of great clinical importance than the appendix, and that it causes more suffering and more deaths. If this is true the tonsil should have the most careful consideration and searching investigation.

It has been shown conclusively that focal infection is the chief etiological factor in rheumatism, arthritis, endocarditis, myositis, myocarditis, various septicaemias, tuberculosis, nephritis, visceral degeneration, thyroiditis, gastric and duodenal ulcers and cholecystitis, and probably a few cases of appendicitis.

The usual site (of focal infection) is usually in the head, in the form of an alveolar abscess, deep tonsillar or peritonsillar abscess, and chronic sinusitis;—the chances are that the tonsil is usually the offending organ.

A brief survey of the anatomy of the tonsil and its physiological connections show very clearly the reason for such a relationship.

Each tonsil has from eight to twenty crypts, usually

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straight, but sometimes tortuous, that extend through the follicular tissue to the capsule. They open on the surface in puncture-like orifices covered with epithelium. Bacteria are absorbed through the cryptic epithelium in sufficient numbers to cause marked disturbances, and the crypts become incubators of staphylococci and the centers of infection.

The outer aspect of the tonsil is subject to compression at each act of deglutition through its attachment to the superior constrictor muscle of the pharynx. The anterior and posterior pillars, between which it lies contain the palatoglossus and palato-pharyngeus muscles respectively, which compress the tonsil.

It may be noted here, incidentally, that because of the close relationship of the posterior pillar to the Eustachian orifice, an inflamed one promotes degeneration of the palatal muscles, or an adherent one interferes with the muscular movements and contributes to the collapse of the tube; and all result in disturbance in the ventilation and drainage of the middle ear, so that deafness results and a condition is produced in which tonsillar micro-organism may find a fertile field for aural infection. However, the relation of the tonsils to ear troubles is not as intimate as that of adenoids.

So we have an organ with open tubules lying in a bed of muscle that subjects it to compression. A number of authorities claim that this muscle compression forces food and bacteria into the crypts rather than out of them. But regardless of the exact method the crypts often become filled with fragments of food, staphylo and streptococci, making them clinically the source of local and constitutional disturbances.

There is no mystery as to the process by which such an infection affects distant organs; a glance at a picture of the lymphatic system makes it so plain that there is no occasion for theorizing. The tonsillar lymphatics drain into the deep cervical chain of lymph nodes under the sternomastoid muscle, then to the thoracic duct from which infection may be carried to any part of the body. In this way an infected tonsil, filled with the products of putrefaction, pus and bacteria, may pour a constant stream of poison into the general circulation and infect almost any organ in the body. This is not a fine spun theory, but simple, elementary anatomy and physiology.

In urging removal of the tonsils the question of their function and effect upon human economy always arises, but even those who have protested loudest against their extirpation, for fear of interfering with their function, have been totally unable to point out that function.

Attempts have been made—but with doubtful success—to show that the tonsils have a protective function against micro-organisms. On this subject an eminent authority says, "If the

tonsils are in some measure a protection, this protective power is limited, and when the power is passed they are a positive source of danger. Such a protective function has never been proven."

Some writers have claimed that the tonsil has an internal secretion, but no one has ever been able to demonstrate it. It is quite widely believed that the tonsils have a pre-natal function, and at birth or very soon after, that function ceases, but whether this be true or not it is certain today that the tonsils have no known function—unless it be the incubation of infection and the dissemination of general disease. It is also certain that their complete removal has no known deleterious effect.

The diagnosis of a diseased tonsil is not always so simple as it might appear, as its size is of only ordinary importance, for it must be remembered that diseased tonsils do not always stand out beyond the pillars, and that a perfectly normal tonsil may not be seen nor felt. Many lie flat and hidden behind the anterior pillar and oftentimes a small buried tonsil, the "submerged", causes more trouble than the hypertrophied; frequently such a tonsil, apparently normal, will exude pus upon pressure.

The relation of the tonsils to the singing voice and the probable results upon the voice of their removal are, in many cases, of far reaching importance, and positive and definite answers and assurances are demanded of the physician.

It is certain that diseased tonsils definitely impair the voice by causing pressure on the muscles forming the pillars and thereby preventing their function of co-ordinating with the muscles of the soft palate, and thus impair the vocal resonance.

The first and immediate effect of the removal of tonsils is to relax the pillars so that they often fail to perform their function and the effect is detrimental to the voice; but after a few weeks they become attached to the new fibrous tissue formed in the sinus tonsillaris, take on new tonicity, and perform their function better than ever before. The physician may then assure his patient with perfect confidence that nothing but good can come to the voice as the result of a properly performed tonsillectomy.

Tonsillotomies, cauterizations; thermic or chemical, opening the crypts, and various other surgical methods have proved themselves inadequate. If a tonsil is diseased it should be removed, root and branch, and there is no more reason to leave a piece of tonsil than a part of the appendix after an appendectomy. When the capsule is included there can be no possibility of recurrence, as often happens in mere tonsillectomies.

Apparently there are almost as many varieties of operation as there are operators; and as many different kinds of instru-

ments. One man dissects the tonsil from the pillars with sharp scissors, another ligates the arteries in every case. Others after a small incision dissect with the dull edge of scissors, and do very neat and effective work, some after the initial incision, dissect with the finger. Some do not dissect at all, removing the tonsil with the eerasur alone.

Each general method has its own strong advocates, and each accomplishes the result desired—the complete extirpation of the tonsil and sometimes the capsule—to the satisfaction of every body concerned. We find the Sluder instrument and method by far the most satisfactory, and we are able in nearly every instance to demonstrate the capsule.

The technique of the Sluder operation is based on the anatomic point, that the alveolus of the jaw always ends in a well marked eminence extending upward to the mylohyoid line, the alveolar eminence of the mandible. This formation varies at different ages, and knowledge of this variation is essential to success. The tonsil lies posterior to, and for the most part below this eminence, and is much more prominent in the young, than in adults.

The gullotine is introduced into the mouth from the opposite side, holding the handle somewhat downward toward the feet, and placed so that its ring sets behind and below the tonsil. The entire instrument is first pressed firmly outward, until the tonsil is pushed from below and behind, and bringing it to the contracted internal pterygoid muscle. The handle is then raised slightly and rotated so that the ring includes the upper part of the tonsil. In this position the instrument is drawn forward and upward. The ring acts very much like a scoop, securing the tonsil from below and behind, and bringing it to the alveolar eminence. The handle is now carried toward the median line. The tip of the index finger of the other hand is now placed in front of the plica triangularis and is used to push or to stroke the unengaged tonsil mass thru the ring. At the same time that the tonsil is being put through the ring, the blade is gently pushed, so as to partly engage the tonsil. The tonsil is now gently pushed through the ring by the finger tip and the blade slowly and completely closed. The tonsil is detached by the pressure of the index finger directed around the ring of the instrument. This obviates the necessity of any great force to excise the tonsil. The operator must have experience before dexterity can be acquired in performing this feature of the operation, because great damage may be done to the pillars and to the soft palate if one is not dexterous.

Anyone who has done this operation and has mastered it, will agree with Dr. J. A. Ellegood in his statement "if the operation is not successful, it is not the fault of the operation, but of the operator."

DISCUSSION—

DR. J. A. ELLEGOOD: The operations of tonsillotomy and tonsillectomy are probably as old as the history of surgery and have had numerous alterations of popularity and disrepute. The former operation, because more easily accomplished, is the one that has been more generally performed.

A part of the tonsil being almost invariably left, however, the recurrence of trouble was so frequent that tonsillectomy has, in the last few years, been again revived and popularized. That it is likely for a long time to be the operation of choice is due largely to the method instituted by Dr. Greenfield Sluder in 1910, and which has just been described.

That method is unique and original, and if skillfully mastered, renders tonsillectomy easy, rapid of performance, and gives rise to the slightest possible traumatism. Its skillful execution requires a knowledge of the anatomy, a digital familiarity with the region of operation, and some practice. It is so often the case, when a new instrument is invented, or a new method described, that some contemporary announces under his name in bolder letters some slight modification of the instrument or change in the technique. While there have been a number of suggestions modifying Sluder's tonsillectomy. The essential and original feature of his operation has not been modified or improved upon. It consists in dragging the tonsil upward and forward until the ring of the instrument meets the ramus of the jaw and acts like a scoop, securing the tonsil from below and behind and bringing it to and holding it against the alveolar eminence, which the dull blade descends into the sulcus between the tonsil and the anterior pillar where the mucous membrane over the latter is reflected over the tonsil.

The effect of the dull blade thus used is to follow the line of least resistance and force in behind, not cut, the mucous membrane which is made to dissect the capsule from the connective tissue which lies between it and the anterior and posterior pillars and the sheath of the superior constrictor. The blade advances until nothing is left between it and the ring except the anterior and posterior layers of mucous membrane, which assumes the curve of the blade and ring of the instrument. Considerable force is necessary when using the dull blade to cut or crush through this tough and elastic membrane sufficiently to liberate the tonsil. Forcefully dragging it out is likely to tear off the membrane from the neighboring parts, an important thing to avoid. In order to overcome this obstacle Sluder devised what he calls a "dog" which he attaches to his instrument and which makes it possible to add greater force to the pressure. This, however, has not been entirely satisfactory. Sauer accomplishes the same result by using a strong instrument which by means of a screw forces the dull blade through the two layers of mucous

membrane. It is but little more satisfactory than the "dog". Beck uses Sluder's technique, but substitutes a snare hidden in the ring of the instrument, instead of the dull blade. The posterior layer of the mucous membrane is drawn forward behind the tonsil until it meets the anterior layer which is in contact with the inner edge of the ring where it is finally cut with the wire loop. It is a question whether separation of the tonsil from behind forward has any advantage over its dissection from before backwards. My personal impression is that it has not. Makuen suggested a modification of Sluder's operation in which a snare is placed over the tonsil, after it has been partially dissected. The blade is then released and the operation completed with the wire. It is claimed that by this method the capsule is split in such a way that one layer is attached to the tonsil while the other remains in situ as a protection to the lymphatic area, the constrictor muscle and the anterior and posterior pillars. Splitting of the capsule does not occur because the fibers of the capsule are so closely interwoven as to preclude the possibility of its being split in any such manner described. Lynch has modified Makuen's procedure by first applying the Beck, instead of the Sluder instrument after the Makuen method and then applies an additional snare over the buccal side of the partially dissected tonsil, the detachment being completed with the second snare. It is claimed that the advantages of this procedure is to greatly lessen the hemorrhage. The control of hemorrhage is accomplished simply by the length of time which the compression is continued before the final cutting of the mucous membrane. It does not matter whether the compression is made with the wire or the dull blade. The splitting of the capsule, if it were possible does not obviate the necessity of cutting or crushing the vessels which supply the tonsil. The layers of mucous membrane can be easily and quickly torn by pressure of the index finger around the ring of the Sluder instrument either on the buccal or faucial side after the tonsil has been pushed through the ring and the blade pressed firmly down. This procedure requires dexterity in order to avoid dragging the mucous membrane from the pillars or other parts.

The writer has performed this method under ethyl chloride anaesthesia in over a thousand cases without accident or mishap, but few were followed by serious hemorrhage and this was easily controlled by the use of the fallo-tannic mixture.

Finger dissection of the tonsil has been performed from time to time since it was first described by Celsus, in A. D. 10. Recently both sharp and dull instruments and even the electric cautery knife have been made use of for dissecting the tonsil from its bed. Excepting in the most skillful hands more or less damage is done to the muscular tissues, and more time is required for the operation than with the Sluder method. Bleeding dur-

ing the operation involves the use of suction apparatus or sponges. The anaesthetic is likewise more prolonged, in cases in which a general anaesthetic is used, and greater assistance is also required. In criticisms of the Sluder method it has been claimed "that as a rule more or less of the anterior pillar is cut away in the operation." In skillful hands it is hardly conceivable how such an accident could occur. When the plica tri-sillaris containing muscle fibres covers the anterior portion of the tonsil, or when muscle fibres from middle constrictor penetrates the capsule, then, and then only, is any damage done to the muscular tissues. That, however, would be inevitable by any method of operation.

A few years ago the writer proposed decapitation of the tonsil followed by digital evisection of the capsule. While theoretically a good procedure, a recurrence of the tonsil tissue occasionally took place. Such an occurrence happening, if only in one per cent of the cases, is sufficient to discredit the operation, so it was abandoned.

It is my firm conviction that in the succeeding generations Sluder's operation will be generally adopted. A recognition of its merit will eliminate provincial and professional jealousy and his name will adorn the pages of surgical history.

General Medical Board of the Council of National Defense

Washington

Report from April, 1917, to April, 1918.

The following statement, which is authorized by the Medical Section of the Council of National Defense, is a brief summary of the report of Dr. Franklin Martin, member of the Advisory Commission and chairman of the General Medical Board of the Council of National Defense, with mention of some of the leading interests and activities of the year of the Board and of the Medical Section, presented at the annual meeting of the General Medical Board, May 5, 1918.

GENERAL.

Secretary of War Baker, on April 2, 1917, authorized appointment of General Medical Board. Dr. Martin designated 35 physicians and surgeons, many of whom have since entered

on active service abroad. Total now is 77. Executive Committee consists of Surgeons General of Army, Navy, and Public Health Service, Dr. Franklin Martin, Dr. W. J. Mayo, Dr. Wm. H. Welch, Dr. Victor C. Vaughan, Dr. F. F. Simpson, Rear Admiral Cary T. Grayson, and Dr. Wm. F. Snow, Secretary. The first meeting was held April 9, 1917.

Requested medical men returning from abroad to furnish information regarding conditions observed in medical services of allied armies; which information was carefully summarized for reference.

Responded to request of Surgeon General to assist in increasing enrollment in Medical Reserve Corps. Enrollments in M. R. C. have been increased from 1,800 in April, 1917, to over 21,000, of which 16,042 are on active duty.

Requested 50 medical societies to furnish lists of their members fitted to perform special work for government.

CHILD WELFARE.

Formed Committee on Child Welfare, comprising representatives of several government departments, educational institutions and national organizations, to co-ordinate child welfare activities, and formulated program covering problems of the child up to school age, which program has been issued to the states through the medium of the States Council Section and the Woman's Committee of the Council of National Defense.

Appointed committees (a) to study best graphic methods of teaching child welfare; (b) to study food values necessary to children and prepare dietaries; (c) to report best procedure as to mid-wife question in present war emergency, and (d) to consider advisability of investigation of institutions caring for children.

CIVILIAN CO-OPERATION IN COMBATING VENEREAL DISEASES.

Developed joint conferences of medical and lay citizens in 50 cities, with officials, to discuss plans for venereal disease clinics or law enforcement measures.

Formulated list of eight measures essential to successful campaign against venereal diseases, and sent to State Boards of Health.

Appealed to State Pharmaceutical Associations for Boards of Pharmacy to assist in eliminating sale of nostrums.

Arranged trips for lecturers who aided Boards of Health in 30 states and stimulated them to more vigorous work.

Partially as a result of correspondence with State Boards of Health, 26 states have adopted measures requiring reporting of venereal diseases, 9 have special venereal bureaus, 14 pro-

vide free laboratory diagnosis, 6 provide arsphenamine, practically or absolutely free. Only 7 states classified as complacent.

Partially as a result of letters to 1,000 mayors, 49 cities provide for isolation and treatment of venereal cases, 51 require reporting of venereal diseases, 43 have clinics, 78 are conducting educational work.

Informed editors of health bulletins and labor journals of details of campaign against venereal diseases.

Distributed printed material and sent personal and circular letters to thousands of persons in communities adjacent to army camps, enlisting their co-operation.

DENTISTRY.

Appealed to dental profession through various dental associations, materially increasing enrollment in Dental Officers' Reserve Corps.

Instrumental in having military instruction included in curricula of dental colleges, and in having applicants for enrollment in Dental Surgeons Corps specially trained.

Co-operated with manufacturers in having dental instruments and supplies standardized.

Secured volunteer services of civilian dental profession in eliminating dental disabilities of recruits.

Recommended improved courses in dental surgery in Army and Navy medical schools.

Initiated investigation as to relation of trench mouth disease to oral and general disease.

Dental Committee recommended higher rank for dentists in Army Dental Corps.

Recommended to general hospitals reorganization of staffs, in order to release as many as possible for Army and Navy service, and urged each person whose services could be spared to apply for appointment.

Hospitals classified exhaustively as to size, convenience to transportation, equipment, and all other details.

Investigated subject of portable hospitals, and recommended purchase of a limited number by the Surgeon General of the Army.

Classified and tabulated for use of Surgeon General's Office data as to private houses and large buildings offered for use as military hospitals.

HYGIENE AND SANITATION.

Recommended to War and Navy Departments that zones around camps and cantonments be placed under military control in order to protect troops from venereal infections. En-

couraged organization of Fosdick Commissions or Training Camp Activities.

Appointed sub-committees on drug addictions, alcoholic control, public health nursing, tuberculosis, and health statistics, which committees have assembled information and recommended definite sanitary measures for guidance of Army, Navy, Public Health Service, American Red Cross, and Civil Health Agencies.

Work of sub-committee on venereal diseases has expanded, and it has become the Committee for Civilian Co-operation in Combating Venereal Diseases, a general committee of the General Medical Board.

INDUSTRIAL MEDICINE AND SURGERY.

Instituted an Advisory Committee on Industrial Hygiene, comprising representatives from Public Health Service, Departments of Agriculture, Interior, Commerce, Labor, and of Organized Industry, Organized Labor, Organized Medicine, and Organized Industrial Medicine, for the purpose of providing against unnecessary human waste in industry and society during war, to offset drain of man-power from industry through raising of military forces to meet need for increased production, to avoid preventable death from accidents and disease, and to improve surroundings of workers.

LEGISLATION.

Drafted Section of Army Bill eliminating sale of alcoholic drinks and prostitution in five-mile zone around camps and cantonments; indorsed by Council of National Defense, and enacted into law within ten days of original rough draft.

Induced authorities to provide for enlistment of medical students of well-recognized schools in Enlisted Medical Reserve Corps, and completion of course before being called into military service. Similar effort made in aid of pre-medical students.

Instrumental in having American concerns licensed to manufacture salvarsan, and other German-owned medicinal preparations. Quantity previously sold for \$4.00, now furnished Government at \$1.00.

Made considerable effort to have rank of medical officers made commensurate with the service which the nation expects from the profession.

MEDICAL SCHOOLS.

Urged students to continue medical education so that upon entering government service they might be fully trained; also urged students to apply for commissions in Medical Corps upon graduation.

Urged schools to release teachers for enrollment in Medical Reserve Corps.

Asked heads of educational institutions to advise pre-medical students to enroll in medical schools of their choice as soon as possible.

Asked medical schools to allow four-year students to substitute senior year in base hospital instead of school, if emergency arises.

MEDICAL WAR MANUALS.

Published four war manuals: 1, "Sanitation for Medical Officers," by Edward B. Vedder, M. D., Lieut. Col., M. C., U. S. A.; 2, "Notes for Army Medical Officers," by T. H. Goodwin, Lieut. Col., R. A. M. C.; 3, "Military Ophthalmic Surgery," by Allen Greenwood, Major, M. R. C., G. E. de Schweinitz, Major, M. R. C., and Walter R. Parker, Major, M. R. C., and, 4, "Military Orthopedic Surgery," by the Orthopedic Council.

These also are ready for publication: "Surgery of the zone of Advance," by George de Tarnowsky, Major, M. R. C.; "Zone of Advance," by George de Tarnowsky, Major, M. R. C.; R. C., and "Lessons from the Enemy," by John McDill.

NURSING.

Instrumental in increasing by 20% number of pupil nurses in training schools, by means of correspondence with college and school graduates, deans of women's colleges, school principals and Board of Education secretaries.

Distributed about 100,000 bulletins and leaflets for information of prospective students.

Made nation-wide survey of country's nursing resources, and urged heads of training schools and hospitals to increase their facilities.

Published series of 12 articles on nursing in newspapers throughout the country.

Instrumental in having nurses included in War Risk Insurance Law.

Secured evidence of need for military rank for nurses, and secured indorsements of this movement from many persons.

Conducted campaign for increasing number of candidates for nursing education.

Co-operated in preparing details of preparatory nursing course for college graduates at Vassar College.

Recommended to Surgeon General of the Army that increased accommodations for nurses be made at camps, that not less than one nurse be provided to six acutely ill men, that there be a reserve of not less than 25 nurses at each camp hospital, and that a qualified nurse tour military and naval hospitals to make observations; all of which recommendations have been favorably received. Miss Annie W. Goodrich ap-

pointed Inspector General of Nursing Service in all military hospitals in the United States and France.

Recommended to superintendents of training schools to speed instruction and hold final examinations and graduations early in 1918, and release graduates for government service.

Co-operated with Red Cross and with National Organization for Public Health Nursing in enrollment of public health nurses in office of Red Cross, and urged public health nursing agencies to release staff members for service in extra-cantonment zones and for rehabilitation work in France and Belgium.

Co-operated with Food Administration in having public health nurses instructed in preparation of war-time food substitutes.

RE-EDUCATION AND REHABILITATION.

Presented to Secretary of War plan for formation of Reconstruction Board, including representatives of Army, Navy, Public Health Service, Red Cross, Council of National Defense, Hospitals and Laboratories, Medicine and Surgery, Vocational Education, Labor and Industry. Secretary of War instructed Surgeon General to call conference and formulate plan. As a result bill was drafted providing for vocational rehabilitation and return to civil employment of soldiers and sailors disabled in line of duty.

RESEARCH.

Instituted investigation of conditions under which canned foods become deleterious.

Was instrumental in having University of Minnesota grow a supply of digitalis adequate for America's needs, to replace supply hitherto obtained from Germany.

Instituted tests of devices aimed to protect the ear from injuries by explosives.

Examined and card-indexed numerous antiseptics and disinfectants, furnishing all information to Medical Supply Department of the Army. Valuable cocaine substitutes and cheap disinfectants found usable. Silenced claims of vendors of large number of absolutely worthless preparations.

Placed subject of shell shock in hands of Dr. George W. Crile for study.

Instrumental in bringing into use several substitutes for ambrine, for treatment of burns.

Instituted study which led to discovery that various preparations of thromboplastin help prolong period for coagulation of blood.

Investigated various devices for preparations for sterilizing wounds and germ carriers.

Instituted study of processes for sterilizing drinking water which led to authoritative statement that use of chlorine is

best means, chlorine now being used under all conditions.

Instrumental in having prepared authoritative review of war literature bearing upon injuries of the peripheral nerves.

Abstracted all obtainable literature on methods of destroying lice, and instituted experimental research.

Instrumental in having published critical review of methods and results of vaccination for smallpox.

Obtained from a noted French authority statement of results obtained by French investigators as to value of Widal test after vaccination for typhoid fever.

STANDARDIZATION.

Held frequent conferences to study means by which production might be speeded, and demand for diverse types of appliances might be curtailed.

Conferences participated in by representatives of Army, Navy, Red Cross, Public Health Service, and manufacturers of surgical instruments and supplies. Result: Substantial increase in production of staple articles, standardization in types and issuance of four catalogues of staple medical and surgical instruments and supplies for use of Army, Navy and Red Cross.

STATES ACTIVITIES.

Obtained through State and County Committees names of physicians (a) available for service in the Medical Reserve Corps, (b) those not available because of physical disability, over-age (55), or because of home community need.

Requested co-operation of medical profession in asking aid of Senators and Congressmen for legislation in reference to advanced rank for medical officers.

Made survey of medical schools, as a result of which arrangements were made for enlistment of medical students of well-recognized schools in enlisted medical reserve corps and placing them on inactive list until completion of their medical education. Similar effort made in aid of pre-medical students.

Organized Volunteer Medical Service Corps for physicians ineligible to Medical Reserve Corps, because of physical disability, over-age, or essential home community need.

Prepared and mailed monthly to State and County Committees percentage tables of recommendations by Surgeon General for commissions in Medical Reserve Corps.

Co-operated with Provost Marshal General's Office in selecting members of Medical Reserve Corps as medical aides to governors. Formulated outline of duties of medical aides.

Co-operated in having representatives sent to 44 states urging membership in Medical Reserve Corps.

Classified membership records of Medical Reserve Corps from code cards, a set being furnished for the Surgeon General's Office in Washington and a set for the representative of

the Surgeon General with General Pershing's Army in France.

Made survey, through a sub-committee, of ophthalmologists of country, and requested those not needed for institutional and civic needs to join M. R. C.

Same committee standardized methods of eye examinations. Held conference on re-education of blind soldiers, and conducted survey of workshops for the blind.

Made survey and classified, through a sub-committee, the otolaryngologists of country (brain, oral and plastic surgeons), requesting those available to join Medical Reserve Corps.

Recommended that specialists in head surgery be assigned to special duty in military hospitals; also that special hospitals be assigned for treatment of eye, ear, nose and throat cases; also recommended definite number of surgeons and assistants of each specialty, for chief hospitals and for each military division.

WOMEN PHYSICIANS.

Prepared index and complete data as to all women physicians in the United States.

Prepared lists of anesthetists, laboratory workers, radiographers, sanitarians, specialists, and industrial surgeons, willing to serve.

Compiled data regarding recent graduates of 35 co-educational medical colleges.

Secured registration of 1,875 women physicians willing to serve—more than one-third of the total number in the United States.

IN MEMORIAM

DR. FRANCIS L. SPRINGER

By P. W. Tomlinson, M. D., Wilmington.

Having, at a former meeting, been requested by this society, and by you appointed a committee of one to prepare a memorial to our lamented late fellow member, Dr. Francis L. Springer, I have endeavored to gather the facts available for this purpose; and with an apology for my feeble efforts, I herewith present the same. As was stated in the "Every Evening" on the day of his death, Dr. Francis Latta Springer was one of the best known men in the county. He was born in Mill Creek hundred, March 20, 1854, being a son of Stephen and Mary Love Springer. He was educated at Newark Academy, Dela-

ware College and the University of Pennsylvania, graduating from the medical department of the latter in March, 1877. He immediately began the practice of medicine in Christiana village, but a few years later moved to Newport, where he remained till death. He had a large practice, and was widely known and respected all over the country. He is survived by Mrs. Springer, who before her marriage was Miss William Reed Churchman, daughter of Henry Churchman of near Stanton; and four children, Mrs. John Brynburg Morrow of Wilmington, Rebecca, who lives at home; Carl, who is a student at Delaware College, and Stephen, who is with the Delaware Electric Supply Company. Three brothers and one sister also survive. They are Rev. Thomas L. Springer of Baltimore, Md.; Dr. Willard Springer, Robert S. Springer and Mrs. Randolph Jones of Wilmington.

Dr. F. L. Springer was a staunch Democrat, and for many years was regarded as one of the party leaders in the county, much of the time being chairman of the Christiana hundred Democratic Committee. A number of times he was a Democratic nominee for office. He was a trustee of the poor, and also county physician at different times. He was a member of Armstrong Lodge, A. F. & A. M. of Newark, and was a director of the Newark Trust Co.

Like Burns, Clay, Calhoun and Whittier he communed at an early age with nature and nature's God. His childhood was passed on his father's farm, and to the salutary open-air life led by him over the hills and valleys of this picturesque portion of Delaware, combined with a sound constitution inherited from his parents, he no doubt attributed in great measure that vigorous health which enabled him to perform the arduous duties that come to the county practitioner.

A strong love of nature remained throughout his life one of the sources of his keenest enjoyment. There were few forest trees and few flowers with the names of which he did not become familiar; few birds with whose notes he was unacquainted.

Few, perhaps, enjoyed more the varied beauties of nature. It is doubtful that the youthful Audubon, with all the enthusiasm of even his southern temperament, was more sensitive to her voices and teachings. It is, therefore, not hard to understand why a life in the country meant more to Francis L. Springer, than an existence in a city could possibly have done. Here he found time to cultivate close relations with the people among whom he lived. Probably no physician was more loved or more trusted by his patients; certainly few men were more popular, as was evidenced by the throng assembled at his funeral to pay their last tribute to the memory of him who in times of anxiety, when the shadow of death was sometimes

hovering over their homes, made sacrifice of time and comfort that he might, to the best of his ability, contribute to their peace of mind.

Here, near the scenes of his childhood, Dr. Springer preferred to have his field of action; here, no doubt, it was his purpose to spend his life, upon objects calculated to promote the honor and welfare of his profession, and finally, to mingle his dust with the dust and ashes of the sons and daughters of Mill Creek and White Clay Creek hundreds.

It was never necessary for Dr. Springer to see new friends. Those who knew him best saw the most in him to admire; his was not a case of "A prophet hath honor save in his own country." He had it where his life was spent; where he was known from boyhood.

He was a better friend to others than to himself. The acquisition of wealth never seem to concern him; a desire for riches never seemed to possess him. The only criticism I ever heard of Francis L. Springer was that he was not as exacting as he should have been with his clientele; that he was too liberal with his patrons; that he gave too fully of his time and labor to many who were able to reward him far more than he required. But this was his way, and in it he no doubt found happiness.

From his family I learn that Dr. Springer was a devoted husband and father; warm hearted, indulgent, and yet exacting with an eye constantly alive to the moral and religious training of his children.

If he ever gave offense it grew out of unavoidable circumstances. He harbored no enmity or ill feeling. He was emphatically the friend of human kind, and an avowed enemy to harshness and cruelty, whether inflicted upon man or the lower animals.

Dr. Springer had ability which was obscured through his modesty. He was kept from greater prominence in his professional career because his delicate and sensitive nature shrank from public gaze.

Whether the subject of this sketch left his family much of this world's goods or not, he has left them an honored name, and this after all is a richer heritage than is that other thing called wealth, which can soon take wings and fly.

As was said by Sallust, the Roman historian, and Caesar's friend, in his "Catilina," "The glory of riches and of beauty is frail and transitory; virtue remains bright and eternal."

While for almost a quarter of a century I have known Dr. Springer, my more intimate acquaintance with him began when he came on the State Medical Examining Board of which I was then a member. Our meetings in connection with this work

were mutually pleasant, and to me always helpful. He was faithful to this, and all other public trusts with which he was from time to time honored. He was a valuable member of this Board. Always considerate of the feelings and interests of the candidate for license, he at the same time endeavored to faithfully carry out the aim of the law for licensing new practitioners. His well poised judgment, aided the rest of us in reaching fair deductions in our final markings, particularly in cases of physicians who had been outside of college walls for several years.

His sense of fairness, his honesty of purpose, and his sympathetic nature endeared him to those with whom he was associated, professionally or officially; and I learned to love as well as admire him for these admirable qualities.

In the death of Francis L. Springer the community in which he practiced his profession has lost a safe counselor, the State a good citizen, and our society a creditable associate and member. The taking away of such a friend is to me a personal loss, and I can feelingly and sincerely say in the words of that princely physician and poet, Oliver Wendel Holmes,

“Fast as the rolling seasons bring
The hour of fate to those we love,
Each pearl that leaves the broken string
Is set in Friendship’s crown above.
As narrower grows the earthly chain,
The circle widens in the sky;
These are our treasures that remain,
But those are stars that beam on high.”

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Editor

DR. W. EDWIN BIRD

907 Delaware Ave.
Wilmington, Del.

Business Manager

DR. J. W. BASTIAN

915 Washington Street
Wilmington, Del.

Assistant Editor

DR. T. H. DAVIES,

Marshallton, Del.

Board of Trustees

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EDITORIAL

The New Draft—Congress has passed the new Manpower bill drafting all men not hitherto drafted between the ages of 18 and 45. At present, it appears that men of 31 to 36 will be called first, then between 19 and 20, then 36 and 40, then 41 to 45, and finally those just 18. Within the age limits of 31 to 45 will be found thousands of physicians, and by a little figuring, we can determine thoroughly what are the chances of any particular doctor being drafted. The total number of physicians in the United States under 45 is 75,500, of whom at least one-half are married, a class which the Government aims to exempt almost entirely. This leaves about 40,000 physicians in this age class liable for military duty, from which should be deducted the 20,000 men who have accepted commissions, being mostly men 21 to 30 years of age. This leaves approximately 20,000 physicians between 31 and 45, single and mostly physically fit, who will register and take their chances of being drafted. Now out of an estimated registration of 16,000,000 men the Government wants 2,000,000, or one-eighth, and the same percentage applied to the physicians would yield 2,500 men, an estimate obviously too low to satisfy the desire for medical men. However, there will never be a medical draft unless there should occur an absolute crisis, for to increase the percentage of doctors taken above that of any other class of men would be paramount to discrimination of the rankest sort, a circumstance

not to be thought of at present. The doctors will be drafted as citizens and not as physicians, and will go wherever sent by the Provost-Marshal General's office, but it is practically agreed in Washington that the Surgeon-General's office, shall have first call on all medical men so drafted. This means that those taken will go to some camp, be inducted into service as privates, and then told to file applications for commissions in the Medical Reserve Corps, which applications will be accepted promptly and the men then sent to Fort Oglethorpe for special training. It is inconceivable that in the existing shortage of medical men in the Army any physician drafted under the new law will not be utilized as a physician: to do otherwise would be an economic as well as a military crime.

Your chances then, brother, are one to eight that, if single, you will be drafted; and perhaps just as great if you are married and have accumulated the means to provide for your family independently of the Government pay. We believe that dependency exemptions among the physicians will be fewer than among the other classes, first, because of the urgent need of doctors for the service, and second, because of the rather large percentage of medical men who, though married, have independent means.

We have said that there would be no medical draft for a while and we have also said that the yield of 2,500 physicians under the new regulations will not satisfy the Government. The new army of 2,000,000 men, based on the average of 7 medical men per 1,000, will require 14,000 doctors, leaving a deficit of 11,500 after the draft. But, we have allowed previously a deduction of only 20,000 for those already in commission, a figure computed as far back as June 1st, whereas in the meantime nearly 8,000 more physicians have gone into service, thus leaving the Government still 3,500 short. How these will be procured we do not presume to say, though we may hazard the guess that pressure of one kind or another will be brought to bear on enough men to equip the army. We do know that Washington especially desires certain men from each community, chiefly men who, though married, have been engaged in more or less surgical work for some years, and who have means beyond their professional incomes. When all is said, these men make the very best officers, and perhaps can best afford to go, and it is well within the range of possibilities that such pressure will be brought to bear upon them that they cannot or dare not resist. At any rate, we may be certain the Government will get enough doctors.

"Some" Cigars—The Editor was out of smokes, but not out of gasoline. He was also about to make a call near our

dearly-beloved Shellpot Park, when the lights there reminded him that there was a haven for smokeless smoker. Alas! He took 20 minutes to find the smokes, and on returning to the parking space, found that his auto had been stolen, together with a valuable satchel of instruments, etc. If any of you see "Mabel," bring her back to her enamoratus. Her last name was Buick; she has six chambers to her heart, and she could easily carry five people. She was born in 1916, and though black, had a fine way of going along smoothly. If you want news of any other of her congenital and acquired character-istics, write us. "Some" smokes! \$200.06 each, for six cigars!

Physicians' Motor Club—This club, which was formed several years ago, has been somewhat dormant of late, but there are signs of an early revival. Many new physicians have come into the State, and they wish to join, but they will have to await the reorganization of the club. However, they are requested to send in their names at once to Dr. Bastian, President, or to Dr. Bullock, Secretary-Treasurer. The prospect is that a fee of five dollars will make one a life-member, receiving one pair of the club's special Red Cross tags. Extra tags will very likely be obtainable for two dollars a pair. New members, as well as old ones, are advised to order at once an extra pair, as these tags are made to order only at intervals of several years, and the tags really afford the physician's car special privileges at times.

THE SOLDIER'S CHANCES.

Great as the danger and large as the losses in the aggregate the individual soldier has plenty of chances of coming out of war unscathed, or at least not badly injured.

Based on the mortality statistics of the allied armies, a soldier's chances are as follows:

Twenty-nine chances of coming home to one chance of being killed.

Forty-nine chances of recovering from wounds to one chance of dying from them.

One chance in 500 of losing a limb.

Will live five years longer because of physical training, is freer from disease in the Army than in civil life, and has better medical care at the front than at home.

In other wars from 10 to 15 men died from disease to 1 from bullets; in this war 1 man dies from diseases to every 10 from bullets.

For those of our fighting men who do not escape scathless, the Government under the soldier and sailor insurance law

gives protection to the wounded and their dependents and to the families and dependents of those who make the supreme sacrifice for their country.

THE LIBERTY LOANS

The United States entered the war on April 6, 1917. Eighteen days later by a practically unanimous vote Congress passed the Liberty Loan Bond bill.

On May 2 the First Liberty Loan was announced, on May 14 the details were made public, and on the 15th the campaign began and closed one month later. The issue was for \$2,000,000,000, the bonds bearing 3 1-2 per cent. interest and running for 15-30 years. The bonds carried the conversion privilege, entitling the holder, if he chose, to convert them into bonds of a later issue bearing a higher rate of interest. Four and a half million subscribers from every section of the country, representing every condition, race, and class of citizens, subscribed for more than \$3,000,000,000 of the bonds. Only \$2,000,000,000 was allotted.

The outstanding features of the First Liberty Loan were the promptness with which it was arranged and conducted, the patriotism of the newspapers, banks, corporations, organizations, and people generally in working for its success, and the heavy over-subscription of more than 50 per cent. Another notable feature was that there was no interruption to the business of the country occasioned by the unprecedented demand upon its money resources.

The Second Liberty Loan campaign opened on October 1, 1917, and closed on October 27. The bonds of this issue bear 4 per cent interest and run for 10-25 years. They carry the conversion privilege. It was announced that 50 per cent of the oversubscription would be taken. Nine million subscribers subscribed to \$1,617, 532,000 of the bonds, an oversubscription of 54 per cent. Only \$3,808,766.150 of the bonds was allotted.

This campaign was marked with the same enthusiastic support of the public as its predecessor. The labor and fraternal organizations were especially active in this campaign, and the women of the country did efficient organized work which greatly contributed to the success of the loan. The men in the Army and Navy worked for and subscribed largely to the loan.

The Third Liberty Loan campaign opened on April 6, 1918, one year exactly after our entrance into the war, and closed on May 4. The bonds of this issue bear 4 1/4 per cent. interest and run for 10 years, are not subject to redemption prior to maturity, and carry no conversion privilege. The loan was announced for \$3,000,000,000, but the right was reserved to ac-

cept all additional subscriptions. Seventeen million subscribers subscribed for \$4,170,019,650 of the bonds, all of which was allotted.

A great feature of this loan was its very wide distribution among the people and throughout the Union and the fact that the country districts promptly and heavily subscribed to the loan, in a great measure making up their quotas earlier than the cities. Secretary McAdoo pronounced this loan the soundest of national financing.

A little over a year ago there was some 300,000 United States bondholders; there are now somewhere between 20,000,000 and 25,000,000. Awakened patriotism has made the American people a saving people, a bond-buying people. The effect of the Liberty Loans on the national character, on our national life, on the individual citizen and our home life is immeasurable—of incalculable benefit. Not less incalculable is their effect on the destiny of the world as our ships plow the seas and our men and material in Europe beat back the Hun.

The Fourth Liberty Loan campaign will begin Saturday, September 28, and close October 19. No American doubts its success; no good American will fail to contribute to its success. The blood of our men fallen in Europe calls to us; our answer must be and will be worthy of them and our country.

On Leukemia

By John W. James, M. D., Dover, Del.

Mr. President and fellow members of the Delaware State Medical Society:—When I was asked by Dr. Bishop to read a paper before this learned body, I hesitated for I realized how difficult it was to present anything new, but after giving the matter careful consideration I consented to read a paper on leukemia, hoping to refresh your memories on some important points, if nothing else.

Virchow and Bennett were the discoverers of this disease in 1841 and differentiated it into two forms in 1883, the splenomyelogenous and the lymphatic. The first was supposed to be characterized by hyperplasia of all the elements of the spleen; the second by hyperplasia of the lymphatic glands. In both forms the new formed cells overflowed into the blood in great numbers, giving rise to characteristic blood changes. In a

great many cases this compares with the former description, but further study has brought out the following facts: In most cases, if not all, in lymphatic leukemia the marrow is more or less completely changed into lymphatic tissue. A great many cases in which the blood showed the characteristic picture of lymphatic leukemia there was no enlargement of the spleen or lymphatic glands. In a few of these cases the enlargement appeared late in the disease. These proofs go to show that the marrow is the starting point of both types. The probabilities are that the whole hematopoietic system—marrow, spleen and lymphatic glands—is involved in every case of leukemia.

Every case of myeloid and lymphatic leukemia presents peculiar characteristic changes. In some cases the marrow changes were absent, in others the glandular changes were absent. In all cases the leucocytic hyperplasia, which is characteristic of all forms of leukemia, may begin in any part of the hematopoietic system. The mildness or severity of the attack depends largely upon what part of the blood-making system the disease begins in. If it originates in the marrow as a lymphatic type, it runs a quicker course, and may kill before it takes on the glandular characteristics. If the disease is chronic, all of the hematopoietic system will be involved. The disease is divided into three groups, depending on the chemical and hematological details:

- 1st. Myeloid leukemia;
- 2nd. Lymphoid leukemia;
- 3rd. Atypical leukemia.

It is a very rare disease. Osler says five times as rare as pernicious anemia, and about as rare as myxoedema. Practically nothing is known as to its cause. It is nearly twice as common in males as in females, and occurs more often between the thirtieth and fiftieth years, very rare after sixty. It is thought by some authorities to be due to an infection. Just a word or two about the pathology. The disease affects the blood making organs almost entirely. Hyperplasia of the leucocytic elements of the bone marrow, with myeloid transformation of spleen and the whole lymphatic system to a lesser extent. There is myeloid infiltration of the capillaries of the liver and lungs, very marked in liver. These are the essential lesions of the disease.

In its onset the patient usually seeks medical advice for an enlargement in the left side of the abdomen. He may complain of weakness and other vague symptoms. This condition may continue for months, with a gradual enlargement of the spleen, and no other marked symptoms. There is nothing definite as to when the disease commenced, or just how. In some

cases the attack is ushered in by an attack of dysentery like the case I will report later on. In the late stages of the disease you may have almost any symptom—hemorrhages, gastro-intestinal disturbances, respiratory conditions, and fever in almost every case, ranging from 102° to 104° . In the early stages there is little or no anemia but in the last stages of the disease the anemia is a marked symptom, causing considerable suffering, muscular weakness, shortness of breath, gastro-intestinal disturbances, oedema, headache, vertigo and fainting attacks. The spleen is enormously enlarged, in some cases filling almost the entire abdomen. The liver is also enlarged, and occasionally the lymphatic glands. The urine shows a great excess of uric acid, due to the breaking down of nuclei from a death of white cells, also, albumen and casts.

The blood picture really enables one to make a diagnosis. Right here, let me urge on you the necessity of blood examination in all cases of anemia and enlarged spleen. If these examinations were made oftener we would fall down less in our diagnosis of these conditions.

The most important thing about the blood picture is the enormous increase in white cells, up to a million or more in some cases. The ordinary varieties and abnormal cells are seen chiefly. Myelocytes thirty to fifty per cent. (30 to 50%) and about equal in number the polynuclear neutrophilic leucocytes. Mast cells and eosinophiles are also increased. In the early stages the red cells are practically normal, but in the terminal stages of the disease, they fall below a million in some cases. The color index is low. The disease runs a chronic course, lasting usually about three years from the date of first treatment, although with the X-ray and benzol life may be prolonged for a much longer time, but the result is usually fatal. The lymphatic type runs a more acute course in some cases, but it may be chronic. The symptoms are about the same. It affects younger people oftener than old, especially the acute cases. The lymphatic glands are more apt to be involved in lymphatic leukemia. The blood picture is especially interesting. In the myeloid type almost any kind of cell is found: while in the lymphatic, field after field shows almost nothing but lymphocytes.

A word about the atypical types of leukemia. The most important variations from the kinds already described are:

- 1st. Leukemic changes without leukemic blood—(Pseudo-leukemia).

- 2nd. Leukemic blood without leukemic changes in blood-making organs.

- 3rd. Apparent changes with pernicious anemia.

4th. Tumor-like growth of blood-making tissue, without leukemic blood.

The three agents most commonly used in the treatment of leukemia are the roentgen ray, benzol and radium or thorium. The Xray has probably given better results than any other remedy, with benzol next. Radium seems to be giving some wonderful results in a few cases. There is less danger in using the Xray, while there is considerable danger in using benzol. The white corpuscles should never be reduced under twenty or twenty-five thousand, or a leukopenia is likely to follow. It is always safer to have blood counts made during the use of benzol, so that the blood picture can be closely watched. There is no doubt life can be prolonged by the use of these agents, but nothing has been found to cure. Billings reported thirty cases treated with benzol. In all, but two, the Xray was used. Six of the thirty were of the myelogenous type. Twenty-five of the thirty have been followed, and at the end of three years from date of first treatment, twenty have died. Four were still under observations; none have been considered cured. Remissions in leukemia have been produced by radium, in patients completely resistant to Xray and benzol treatment, where the radium was applied over the spleen by the cross fire method. (This method was first described by Dominici and afterward elaborated by others, notably in the treatment of uterine fibroids). These cases of leukemia seemed to improve rapidly; the spleen decreased in size; the blood picture improved, and the general condition of patient was much better in every way. Some of these cases lived for a number of years, and kept in good condition by occasionally repeating their radium treatment.

It should be noted that:—

1st. Surface applications of radium in leukemia produce striking, indeed remarkable improvement in

(A) The blood picture, which becomes almost normal;

(B) In the size of the spleen and glands, which are reduced to normal;

(C) In the general condition of the patient, who from a emaciated and weak condition may become plump and strong.

2nd. The duration of remissions is variable. It may last for months or years.

3rd. The results of radium treatment are not regarded as curative. It is believed to be, however, the safest as well as the most prompt palliative measure in cases of chronic leukemia, whether refractory or not.

In conclusion I would like to make an abbreviated report of a case of myelogenous leukemia of my own. I was first called to see Mrs. R. August 7th, 1912. I found her suffering

from dysentery. She had a rather severe attack, which lasted about two weeks, but finally recovered. I never treated her again until May 15th, 1913, when she came to me complaining of enlargement in left side of abdomen in the region of the spleen, and said she had never been quite well since her attack of dysentery, having suffered more or less from weakness. Examination showed a large mass, smooth on top, with sharp edges, reaching down to the anterior superior spine on the left side, and to right of umbilicus for about two inches. There was very little pain, and practically no tenderness on pressure. She complained of heavy weight and dragging sensation. Her tongue was clean; heart action normal; appetite good; no enlargement of other glands. I made a diagnosis of medullary leukemia, which was afterward confirmed by an examination of the blood, when her W. B. C. was 206,800. I gave her iron and arsenic preparations and Xrayed her bones and spleen. The Xray treatment was kept up about twice a week, and she seemed to improve. The spleen was reduced in size, and her general condition kept very good until October of the same year, when she seemed to grow rapidly worse, very weak and anemic, with gradual loss of weight. On October 22nd, 1913, she was placed in a hospital. At this time her spleen was fourteen inches in diameter and nine inches long. Blood examination showed R. B. C. 3,440,000; W. B. C. 213,500; Hb. 35%. She was put on benzol and olive oil, of each five drops four times a day. The other treatment was symptomatic. The patient spent about one month in the hospital, and improved rapidly. The spleen was very much reduced in size, and she became more comfortable in every way. The benzol was kept up at home until she was admitted again to the hospital on December 15th, 1913, and remained there until December 24th, 1913. She was given two Xray treatments, and the benzol and olive oil were continued. Her blood count then showed R. B. C. 2,890,000; W. B. C. 94,000; Hb. 85%. Her third admission was on September 23rd, 1914, remaining in the hospital until the next day. After these treatments, the spleen returned to normal size; R. B. C. 3,680,000; W. B. C. 72,000; Hb. 68%. Two months later the spleen increased to its former size again. The fourth admission was misplaced; therefore, I got no history of this treatment. Patient had a very severe attack of "grippe" and pneumonia from March 2nd, 1915 to April 17th, 1915, and came very near dying. During this attack of pneumonia a very curious thing happened. The spleen reduced in size to almost normal, without any specific treatment other than for the pneumonia. She was again admitted to hospital on March 20th, 1916, and remained there until April 11th, 1916. She was given symptomatic treatment and benzol; also Xrayed.

Blood count showed R. B. C. 2,800,000; W. B. C. 186,000; Hb. 35%. Patient did not respond well to treatment and became discouraged. She returned home and gradually continued to grow worse. I was called to see her June 23rd, 1916, and found her suffering from considerable nausea; tongue very red, temperature $102.3-5^{\circ}$; spleen enormously enlarged (16 inches in diameter and 13 inches long) extending well down into the pelvis. She, also, showed a passive congestion of both lungs, a soft systolic murmur over the apex of the heart. I continued to treat her, but there was no sign of improvement; rather a gradual downward tendency, until about July 22nd, 1916, when she lapsed into coma, and died July 23rd, 1916. It was impossible to get a complete report from the hospital on this case, but I have given you enough to get a fair idea of the treatment and its effect on the blood and spleen. It is my belief that this patient's life could have been prolonged for some time if she had continued under regular treatment.

I have attempted to present some things in this paper that may help some brother practitioner to make a diagnosis in leukemia, and to stimulate further research in the hope that someone will find a remedy to cure this dreadful malady.

I thank you for your kind indulgence.

Empyema in the Army

The War Department authorizes the following statement from the office of the Surgeon General:

By means of teamwork on the part of specialists, the Medical Department of the Army has now erected a dependable line of defense against empyema, the disease of the lungs that assumed the proportions of an epidemic in the camps and cantonments last winter, causing many deaths. The cause of the disease has been definitely ascertained and the best method of treatment established.

Differs From Ordinary Form.

The form of the disease that appeared in the camps last winter differed from the ordinary disease seen in civil life, being due to the streptococcus, one of the most dreaded germs known. Next winter, or at any other time, if a similar epidemic should attack the men in training or overseas, it is certain—that is, as certain as a forecast can be in reference to

a disease as virulent as empyema—that the Surgeon General will be able to prevent a serious spread and will be able to rob the disease of its greatest danger.

To appreciate fully the nature and magnitude of the victory achieved it is necessary to understand in brief the nature of empyema and also to recall the general health conditions in American Army camps last winter.

Camp Conditions Considered.

The men at the camps were experiencing their first winter campaign. Many of the troops from the country districts had never suffered from the diseases of childhood, such as measles. Cases of measles appeared in the camps and the disease spread through the recruits from the country. Measles in adult life is very serious, frequently being followed by pneumonia. Other complications occurred to increase the gravity of the infections, none of which were more serious than empyema.

Empyema is an infection that attacks the membrane covering the lungs or the membranous lining of the chest walls. It produces a fluid, oftentimes pus, which remains between the two membranes. The amount of the exudate constantly increases and the lungs are forced up into a smaller and smaller space as the fluid tends to fill the pleural cavity. During this stage of the disease breathing becomes more labored and difficult, due to the restricted air space in the lungs. Aside from this aspect of empyema, which alone may prove fatal, the virulence of the germ is such that the infection is always to be dreaded.

Cause Long Unknown.

While similar epidemics have ravaged all armies for the last three centuries, at no time has the cause been known. The first known operation for empyema was performed in a similar epidemic during our War of 1812.

At the very inception of the epidemic Surg. Gen. Gorgas ordered special investigations to be made. Following this, the cause was discovered by an intensive study in the laboratory divisions of the bacteriology and pathology, the exact nature of the disease and the medical treatment outlined by the Army physicians, and the method of its spread determined by active work carried on by the medical department in every camp.

Best Method of Treatment.

The Surgical Division was charged with the problem of devising the best method of treatment. To this end a special group, consisting of surgeons, internists, and laboratory workers, was located at Camp Lee, Va., where a large group of patients were available for study. At the same time empyema

teams, consisting of a surgeon, a medical man, and a laboratory expert, were appointed from the staff of each base hospital to treat and make a special study of all cases at their particular hospital.

In civil practice the ordinary type of empyema is operated upon almost as soon as diagnosed. But today a patient in an Army hospital would probably not be operated upon until the primary acute infection had spent its virulence, as it has been found that this disease is entirely different from that met in civil life.

Risks of Early Operation.

The medical officers feel that early operation may involve great risks without compensating benefits. The treatment carried out by the Empyema Commission consists of removing the pus by aspiration at as frequent intervals as necessary; that is, drawing off the fluid contained in the pleural cavity with the aid of a needle and suction apparatus. The laboratory men on the commission proved that the virulence of the exudate usually decreased during the periods between aspiration; in other words, nature herself seems to take a hand. The medical officers have found that the best time to operate is when the general condition of the patient begins to improve. The operation is usually performed under a local anaesthetic. In operations means are taken to prevent collapse of the lung. Many ingenious devices for the treatment of the disease have been introduced. In one hospital, where a ward was filled with patients suffering from empyema, the entire group of draining abscess cavities were attached by tubing to a central suction pump so as to keep the pus sucked out and keep the lungs of the patients expanded.

The following figures, taken from the report of the empyema team at the base hospital at Fort Riley, Kans., demonstrate the effectiveness of the new technique of treatment. From October 20 to January 29, 85 cases were under treatment which were not aspirated. Of these, 52 died. From January 29 to April 30, 69 cases were being treated. All of these were aspirated. The deaths numbered 6.

The Volunteer Medical Service Corps

The Committee on Public Information issues the following statement authorized by Dr. Franklin Martin, member of the

Advisory Commission and chairman of the General Medical Board, Council of National Defense:

The Volunteer Medical Service Corps was authorized by the Council of National Defense on January 31, 1918. Under this authorization the membership of the corps consisted of all physicians who, because of overage, physical disability, dependents, and essential home needs, were not eligible for service in the Medical Reserve Corps of the Army or Navy.

Enlarged Scope of Organization.

On August 5 the Council of National Defense authorized a change in the scope of the organization and an increase and amplification of its central governing board. Membership in the corps as now authorized makes eligible to the corps every legally qualified physician, including women physicians, holding the degree of doctor of medicine from a legally chartered medical school, without reference to age or physical disability, provided he or she is not already commissioned in the Government service.

President Wilson's Approval.

This organization has now the approval of the President, as indicated in the following letter:

The White House, Washington, August 12, 1918.

My Dear Dr. Martin: I have received your letter of August 5, laying before me the matured plan for the reorganized Volunteer Medical Service Corps, of which you ask my approval. This work was undertaken by you under the authority of the Council of National Defense; it has had great success in enrolling members of the medical profession throughout the country into a volunteer corps available to supply the needs of the Army, Navy, and Public Health Service.

In cooperation with the general medical board of National Defense, the strong governing board of the reorganized corps will be able to be of increasing service, and through it the finely trained medical profession of the United States is not only made ready for service in connection with the activities already mentioned, but the important work of the Provost General's Office and Red Cross will be aided and the civilian communities of the United States assured consideration. I am very happy to give my approval to the plans which you have submitted, both because of the usefulness of the Volunteer Medical Service Corps and also because it gives me an opportunity to express to you, and through you to the medical profession, my deep appreciation of the splendid service which the

whole profession has rendered to the Nation with great enthusiasm from the beginning of the present emergency.

The health of the Army and the Navy, the health of the country at large, is due to the cooperation which the public authorities have had from the medical profession; the spirit of sacrifice and service has been everywhere present and the record of the mobilization of the many forces of this great Republic will contain no case of readier response or better service than that which the physicians have rendered.

Cordially and faithfully, yours,

WOODROW WILSON.

Dr. FRANKLIN MARTIN,

The Advisory Commission,
Council of National Defense

Central Governing Board

At a meeting of the central governing board, held on Friday, August 2, it was moved by Dr. Sawyer, seconded by Dr. Martin, that the central governing board shall consist of the present central governing board (excepting Sherck, Bradford, and Brophy) and others as follows:

Surg. Gen. William C. Gorgas, United States Army

Surf. Gen. William C. Braisted, United States Navy.

Surg. Gen. Rupert Blue, United States Public Health Service.

Provost Marshal General E. H. Crowder.

Dr. Franklin Martin, chairman of committee on medicine and sanitation, Council of National Defense.

Dr. Edward P. Davis, president Volunteer Medical Service Corps.

Dr. John D. McLean, vice president.

Admiral Gary T. Grayson, United States Navy.

Dr. F. F. Simpson.

Dr. Frank Billings.

Dr. H. D. Arnold.

Mr. W. Frank Parsons, Red Cross.

Dr. Victor C. Vaughan.

Dr. William H. Weleh.

Dr. Robert L. Dickinson, Chief of Staff's Office.

Col. R. B. Miller, United States Army, chief of personnel division.

Col. James S. Easby-Smith, executive officer.

Dr. Joseph Schereschewsky, Assistant Surgeon General (personnel).

Dr. C. H. Mayo, or W. J. Mayo.

Dr. William Duffield Robinson.

Dr. George David Stewart.

Dr. Charles E. Sawyer.

Dr. Duncan Eve, sr.

This board is to be constituted of 25 persons, there being two vacancies at present.

GENERAL PLAN

The Volunteer Medical Service Corps is exactly what its name indicates. It is a gentleman's agreement on the part of the civilian doctors in the United States who have not yet been honored by commissions in the Army and Navy, and a representative board of governors consisting of officials of the Government associated with lay members of the profession, in which the civilian physician agrees to offer his services to the Government if required and asked to do so by the governing board.

It is a method of recording all physicians who are not yet in service and classifying them so that their services when required will be utilized in a manner to inflict as little hardship on the individual as possible. It is a method by which every physician not in uniform will be entitled to wear an insignia which will indicate his willingness to serve his Government.

As more than 60 per cent of the physicians of the country will be utilized in caring for the industries at home and the health of the home people, this large percentage of necessity will be expected to maintain their home status and continue their ordinary professional work.

A. Object of Corps

1. Placing on record all medical men in the United States.
2. Aiding Army, Navy) and Public Health Service in supplying war needs.
3. Providing the best civilian service possible.
4. Giving recognition to all who record themselves either in Army, Navy, public health activities, or civilian service.

B. This Organization Provides

1. Means for obtaining quickly men and women for any services required.
2. Furnishes recommendations and necessary credentials to assure the best of service both military and civil.
3. Determines beyond question the subject's attitude toward the war.

Note.—Through this organization plan, many men will be registered for Army, Navy, and Public Health Service who can be called when needed without delay, thereby a medical reserve of thousands of men will be created at once which will be im-

mediately accessible for Army, Navy, Public Health and civilian service, no matter how urgent the needs.

Up to the present there have been so many to be called that no great difficulty has been experienced.

From now on quick needs will be more difficult to fill, except as they have been anticipated by having a direct line on those who are willing to serve. This necessity the Volunteer Medical Service Corps fulfills, not alone as relates to war needs but also to the increasing civilian needs.

C. Civilian Service

One great need of definite organization is in relation to civilian service. Unless some fixed plan is adopted home people may suffer and medicine itself may be discredited.

This plan registers all medical men and women for all kinds of service and places them within reach of those who know the needs and will arrange for their supply.

D. Recognition

In the Volunteer Medical Service Corps everyone will have definite recognition of his standing as related to the war and will receive proper credit for service rendered, whether in Army, Navy, Public Health, or civilian service.

E. Conservation of the Profession

If all medical services are conserved, we should not suffer. Indiscriminate placement and inconsiderate acceptance of men for war service may bring suffering, while specific organized handling of all medical forces will afford ample medical attention for all.

Such is the purpose of the Volunteer Medical Service Corps.

TENTATIVE CLASSIFICATION PLAN

1. Fit-to-fight men under 40.
2. Reserves under 55.
3. Home forces over 55.
4. Ineligibles.

Reserves will consist of those who may be called upon for Army, Navy, Public Health, and civilian service when necessity requires. The home forces are those who are only able to do civilian service.

DEFINITE CLASSIFICATION

1. Medical Reserve Corps.
2. Volunteer Medical Service Corps.
3. Ineligible.

Note.—1. Such as are needed in the present or near future Army or Navy service. 2. Such as may be called for special

Army or Navy and Public Health Service and for all civilian service. 3. Such as have been charged with unprofessional conduct, moral unfitness, or professional inaptitude.

RULES OF ORGANIZATION

I. Name: The name of the organization shall be the Volunteer Medical Service Corps of the United States.

II. Object: 1. The object of the corps shall be to mobilize the medical profession in order to provide for the health needs of the military forces and civil population of the country.

2. Services of members will be called for and rendered in response to requests from the Surgeon General of the Army, the Surgeon General of the Navy, the Surgeon General of the Public Health Service, or the general medical board of the Council of National Defense.

III. The Corps: The corps shall consist of all members of the organization. The management of the corps shall be vested in a central governing board.

IV. Central governing board: The central governing board shall be appointed by the Council of National Defense and approved by the President of the United States.

V. Officers: The central governing board shall direct the activities of the corps, and shall select from among its own members a president, a vice president, and a secretary.

VI. State governing boards: 1. The State governing boards shall consist of the members of the State committees, medical section, Council of National Defense. The State committees shall select, subject to the approval of the central governing board, from 5 to 10 of their members who are eligible for election in this corps to act as the executive committees of the Volunteer Medical Service Corps in the respective States.

2. The duties of the executive committee of the State governing board shall be to consider applications for membership in the corps from the respective States, and to submit recommendations regarding these applications to the central governing board.

3. The State governing board shall aid in the work of the executive committee of the State and perform such other duties as may hereafter be deemed essential by the central governing board to accomplish the purpose for which the corps was created.

VII. Membership; 1. Every legally qualified physician holding the degree of doctor of medicine from a legally chartered medical school, without reference to age or physical disability, may apply for membership in the Volunteer Medical Service Corps shall be made upon blanks furnished for that purpose by the central governing board for proper classification according to training and special fitness.

4. Any member of the Volunteer Medical Service Corps who wishes to change his classification may appeal to the central governing board.

5. The central governing board shall be empowered to elect from time to time to the Volunteer Medical Service Corps members of sanitary engineering and hygienic professions.

VIII. Method of election: 1. The members of the corps shall be graduates in medicine who are licensed to practice medicine in their respective States, who have made application requirements that are now or shall from time to time be established by the central governing board, who are eligible as under Article VII above, and who shall be elected to membership in the corps by the central governing board.

2. Each person elected to membership in the corps shall be designated as a member of the Volunteer Medical Corps.

3. It shall be the duty of each member of the Volunteer Medical Corps to notify the central governing board when he accepts a Government commission.

IX. Insignia: 1. Members of the corps shall be authorized and required to wear the insignia of the corps.

2. The insignia and certificate shall be secured by members of the corps under such regulations as may be determined upon by the central governing board.

3. The insignia shall not be loaned to any person not a member of the corps, nor shall it be worn after notification that eligibility to the Volunteer Medical Service Corps has ceased to exist; and it shall be returned on demand of the central governing board.

X. Any member of the corps may be expelled for conduct which, in the opinion of the central governing board, is derogatory to the dignity of the corps or inconsistent with its purposes.

XI. The central governing board shall be authorized to provide such regulations as shall from time to time become necessary.

XII. Authorization: The organization, the insignia, and the certificate have been authorized by the Council of National Defense.

OPERATING SYSTEM

1. Central Governing Board of 25

2. Forty-nine State executive committees.

3. One representative in each county in every State.

(Note).— (a) All men to be appointed to State and county committees preferably over 55.

(b) Each State executive committee to consist of five in the smaller States and one additional member in each of the larger States in proportion to each 1,000 medical inhabitants

(to be nominated by State committees, Medical Section, Council of National Defense, from among their own members).

(c) Each county of 50,000 population or under should have one representative. All counties having over 50,000 population should have one additional county representative for each 50,000 population or fraction thereof. All county representatives to be nominated by the State executive committee.

DUTIES

Central Governing Board,—To receive and pass upon all appointments.

State Governing Boards,—To receive facts from county representatives and make recommendations to Central Governing Board.

County Representatives,—To submit facts to State committees according to advice from Central Board or States Executive committees.

Under the reorganization, every legally qualified physician, man or woman, holding the degree of Doctor of Medicine from a legally chartered school, who is not now attached to the Government service, and without reference to age or physical disability, may apply for membership and be admitted if qualified; whereas, the original organization admitted only those for various reasons were ineligible to membership in the Medical Reserve Corps. The organization will mobilize the medical profession in order to provide for the health needs of the military forces and the civil population, and the recording classifying of doctors will afford means of obtaining quickly men and women for any service required.

To date about 40,000 of the 144,116 doctors in the United States—not including the more than 5,000 women doctors—either are in government service or have volunteered their services. Up to July 12 the Surgeon General had recommended to the Adjutant General 26,733 doctors for commissions in the Medical Reserve Corps. About 9,000 others who applied were rejected. With the 1,184 in the Medical Corps of the National Guard and 1,600 in the Navy, the total —38,527—constitutes 26, 73 per cent. of the civilian doctors. Deducting those who declined their commissions or who have been discharged because of subsequent physical disability or other causes, the number actually commissioned in the Medical Reserve Corps stands (August 23) at 23,531. There are 22,232 now on active duty.

The need of using wisely the service of the medical men, in view of the universal war activities, is indicated when it is known that in the five weeks ended August 2, there were 2,700 medical officers commissioned in the Army, Navy, and Public

Health Service—or at the rate of 540 per week. This rate at which enrollment is proceeding is the cumulative result of the operation of all the machinery which has been in process of setting up since the United States entered the world war. While the number commissioned is the five weeks mentioned may seem large, it is not much greater than the rate at which medical men have been receiving their commissions during the past year. There are now 28,674 medical officers commissioned in the three services—26,027 in the Army, 2,427 in the Navy, and 220 with the commission of Assistant Surgeon in the United States Public Health Service. Of the 2,700 commissioned in the five weeks ended August 2, there were 2,527 in the Army, 169 in the Navy, and 4 in the United States Public Health Service. Also, 40 doctors designated as Acting Assistant Surgeons have been taken on in the Public Health Service in the last two months, 21 for work in extra-cantonment zones, 14 for special venereal disease work, and 5 for marine hospitals. The 26,027 in the Army medical service comprise 933 in the Medical Corps, the regular Army service; 23,531 in the Medical Reserve Corps; 1,194 in the Medical Corps of the National Guard, and 369 in the Medical Corps of the National Army.

It is estimated that at least 50,000 doctors will be necessary eventually for the Army. It can readily be seen that with the enrollment of these active men, their places in communities and institutions must be cared for and the work, therefore, throughout the country must be so systematized and co-ordinated that the civilian population may not suffer. An important aspect is the need for medical men in the communities where munitions and other vital war products are being made. The Volunteer Medical Service Corps Supervised by the Central Governing Board now named, will thoroughly care for these needs.

In connection with the mailing of membership blanks for the Volunteer Medical Service Corps to all legally qualified men and women doctors of the country, Dr. Franklin Martin, Chairman of the General Medical Board of the Council of National Defense, says:

“Great as has been the response to the appeal for doctors, it must be great. It is imperative that every doctor not already in a government service fill out, sign and return the blank to the offices of the Central Governing Board, Council of National Defense, Washington, at once. We believe thousands will do this, as they are anxious to be enrolled as volunteers for the Medical Departments of the Army and Navy before registration under the new draft law goes into effect. The appeal for enrollment in the Volunteer Medical Service Corps, which President Wilson has formally approved, is an official governmental

call to service. This will place the members of the medical profession of the United States on record as volunteers, available for clasification and ready for service when the call comes."

Regulations For Physical Examinations for U. S. Army

The War Department authorizes publication of the following preliminary statement and rules for standards of physical examination governing the entrance of the armies of the United States.

The regulations are for the use of medical officers of the Regular Army, National Guard, Medical Reserve Corps, recruiting officers of the United States Army, and of local boards and medical advisory boards under the selective-service regulations.

1. Preliminary Statement and Rules

1. The purpose of the Standards of Physical Examination is to secure greater efficiency and uniformity in the examination of registrants and enlisted men. Medical examiners should consider the standards as a guide to their discretion; therefore they are not to be construed too strictly or arbitrarily. The object is to procure men who are physically fit, or who can be made so, for the rigors of field service, or for special and limited service, and the determination of these questions is left to the judgement of discretion of the examining boards appointed under authority of the selective-service law, and to the military examining surgeons at mobilization camps and other Army posts and stations.

Apply to Volunteers

2. As the physical standards established by these regulations apply to voluntary applicants for enlistment, as well as to registrants, under the selective-service act; the term "registrants," as used therein, may be considered as including applicants for enlistment where such interpretation is necessary to a proper application of the text.

3. Voluntary applicants for enlistment who do not come within the standards of acceptance for general military service as applied to registrants under the selective-service act will be rejected for all military service, unless the defects are waived by authority of The Adjutant General of the Army.

4. Local boards have original jurisdiction, subject to review on appeal to district boards, and may accept or reject registrants for military service as follows.

Acceptance and Rejection

(a Registrants who on examination are found to present conditions which fall within the proper standards shall be un-

conditionally accepted for general military service.

(b) Registrants who on examination are found to suffer from remediable defects which fall within the proper standards may be accepted for general military service in the deferred remediable group.

(c) Registrants who on examination are found to present defects which fall within the proper standards may be accepted for special and limited military service.

(d) Registrants who on examination are found to present defects which fall within the proper standards shall be unconditionally rejected for all military service.

5. Local boards need not make a complete physical examination of every registrant. Upon discovery of a defect requiring unconditional rejection the physician of the local board need proceed no further; but in all other cases there must be a complete examination as prescribed in section 182, Selective Service Regulations.

Powers of Advisory Boards

6. Medical advisory boards have no power to determine finally whether a registrant shall be accepted or rejected for military service. This power is placed by the Selective Service Regulations in the local and district exemption boards. The functions of the medical advisory boards are, as the name imports, to examine registrants referred to them by the exemption boards and State adjutants general, and to return the result of their examinations, inserted at the proper places in Form 1010 P. M. G. O., "Report of Physical Examination" (sec. 282, Selective Service Examinations, p. 155). The medical advisory boards are not required to make a complete examination. When it is found that the registrant is physically or mentally unfit within the standards of unconditional rejection, the examination need proceed no further. After a medical examination of the registrant, the chairman or a designated member of the advisory board, shall certify the result in the proper space on Form 1010, and return the result in triplicate to the local board through the mail or by messenger other than the registrant.

Purpose of Advisory Boards

7. Medical advisory boards were created for the purpose of reexamination of registrants who request to be reexamined by a medical advisory board, or concerning whose physical condition the physicians of the local boards are in doubt. Local boards should feel free to ask the advice of the medical advisory boards concerning the mental and physical fitness of registrants. There should be cordial cooperation between the local boards and the medical advisory boards. Cooperation may be

made profitable and practical between the local boards and medical advisory boards when this is possible. In many districts the members of the medical advisory boards have the opportunity to be in close touch with the local boards. In some large advisory districts the opportunity for frequent consultation and conference may be infrequent and difficult. Through the medical aide to the governor ways and means for cooperation may be found. The standard of efficiency of the medical advisory boards should result in the rejection of all registrants referred to the advisory board for examination who are physically and mentally defective within the standards of unconditional rejection. This is very important as a measure of economy and justice to the Government, the Army, and the registrant.

8. Local boards and medical advisory boards should be especially careful in the selection of registrants who suffer from defects of vision, defects of hearing, and with chronic discharge from the ear or ears; toxic conditions associated with abnormal conditions of the thyroid gland; valvular disease of the heart; tuberculosis; epilepsy, mental disease or deficiency, and irremediable defects of the feet. In other words, to make a good soldier the registrant must be able to see well, have comparatively good hearing, his heart must be able to stand the stress of physical exertion, he must be intelligent enough to understand and execute military maneuvers, obey commands, and protect himself, and must be able to transport himself by walking as the exigencies of military life may demand.

9. District boards have appellate jurisdiction over all decisions of local boards, including the finding of local boards as to physical qualifications; but in considering appeals as to physical qualifications the district board may not conduct any new physical examination or receive or consider any evidence which was not considered by the local board. (See sec. 126, Selective Service Regulations.)

Medium of Communication

10. The Army medical officer detailed as medical aide to the governor should be the instrument of communication between the governor or his adjutant on the one hand and the local and medical advisory boards on the other hand in all matters concerning questions relating to physical examinations. He should inspect the work, records, and methods of local boards and medical advisory boards from time to time as he may be directed by the governor and give them all necessary instructions and assistance.

11. Local boards may not induct registrants accepted for general military service who are in the deferred remediable group or for special or limited military service, until a special

call has been made by the Provost Marshal General's Office for these groups of registrants.

12. The final decision as to the acceptance or rejection of inducted men under these regulations rests with the military authorities at the mobilization camps or other military stations to which the registrants are sent upon induction into the military service.

IN MEMORIAM

DR. READ J. MCKAY

By J. A. Ellegood, M. D., Wilmington

Again death calls upon us amidst life's busy scenes to pay tribute to the memory of a departed friend. How frequent the reminder! One by one our associates have fallen by the wayside, weary with the march of life, and we have borne them mournfully away to their resting place.

One of the most beautiful traits of the human character is that the living mourn the loss of the dead.

Memorial exercises are in obedience to the natural instinct of mankind, and preserve a custom most agreeable to the human heart. It is an occasion when the purest motives prevail, and hearts grow warm with the inspiration of the hour. It is a time at which we reverently recall the life struggles and triumphs, and recount the noble deeds of those whose memory we love and respect.

It is perhaps the universal desire of the living to be kindly remembered by those who survive and succeed them; a desire springing from no inordinate self-esteem, but innately implanted in the human breast as an incentive to honorable and useful lives among men. It would be impossible to estimate the influence of this laudable ambition upon human action, or measure its value upon the happiness and well being of society. The commemoration of the characters of the deceased, who by their labors and talents, have attained to acknowledged distinction, is not only a just tribute to their memories, but an inducement to the living to emulate their virtues, and imitate their example of usefulness and honor. We, therefore, best honor the dead, and most benefit the living, when we form a just estimate of their lives and characters, and accept and apply the instructive and inspiring lessons which they teach.

“Lives of great men all remind us
We may make our lives sublime,
And, departing, leave behind us
Footprints on the sands of time.”

“The greatest efforts of the race,” says Ruskin, “have always been traceable to the love of praise.”

How much more happiness, and what greater incentive to cultivation of the nobler qualities, would be given, if more praise were bestowed upon worthy deeds during our lives, rather than deferred until after the hour of death. How sad “that founk ’ll tak a man’s best wark a’ his days without a word, an’ no dae him honor till he dees.”

For lack of appreciation many a fine spirit has fainted by the way-side, many a loving heart has shut itself up in loneliness, and many a lofty and aspiring soul has fallen short of success. For the words of encouragement that are never spoken hearts pine that might have aspired to perform magnificent deeds, and lives that might have made immortal music pass into a dark and hopeless silence.

“Suppose the blossoms heaped upon men’s biers
Were strewn along the highways of their life;
Suppose the praises chanted in dead ears
Were whispered tenderly in hours of strife,
Suppose the hearts, that pour their bitter tears
Upon our graves had lent their strength in years
When just one heart could turn a losing fight.
And make us strong by Love’s supernal might.”

Read Jennings McKay, to whose memory we now pay tribute, was born in St. Louis, Mo. Feb. 6, 1843. After his early schooling he entered Lincoln Academy, from which he graduated in the year 1861 with the degree of B. A. When the war between the States began, his training and his conscientious sense of duty bade him follow the political fortunes of the Confederacy. During that trying and unequal struggle his heroic spirit never faltered in devotion to that cause, which he believed to be the cause of civil liberty and Constitutional Government. But, when that fateful struggle ended he laid aside sectional strife. He extinguished the bitter memories of the war, and welcomed the reunion of hearts and hands over all the land.

He felt that it was no reflection upon southern manhood to imitate the great example of that immortal Chieftain, whose watchword was duty, and who from the day of his surrender at Appomattox, to the day of his death at Lexington, never failed to inculcate the doctrine, that, having renewed his allegiance to the American Constitution, he had duties to perform as an American citizen.

At the end of hostilities he matriculated at Bellevue Medical College, New York, from which he graduated in the year 1867. After his graduation he spent one year in general practice on Staten Island. He then moved to New York City, where he remained nearly nine years, also in general practice. During his residence in New York he devoted much time to the study of ophthalmology and otology. During part of 1871 and 1872 he was in Paris and London pursuing his special work. In 1887 he came to Wilmington, where for thirty years he was engaged exclusively in the treatment of diseases of the eye, ear, nose, and throat.

In his early manhood he married Miss Mary Stuart Elliott, a lady of great intellectual, social and moral worth, who several years ago preceded him to the grave. In making the choice of a profession Dr. McKay followed the bent of his earliest inclinations, and he lived to realize that his fidelity to his calling had met with its just reward. With the commendable pride of an intelligent and well read man he spared no pains or expense in preparing himself to enter upon professional life, and he came to Wilmington well equipped for the duties and responsibilities that lay before him.

He was a man with ability and intelligence far above the ordinary, and had he remained in the metropolis would doubtless have enjoyed at least a national reputation for knowledge and skill in his profession. Circumstances and environment have much to do with the making of a man's reputation. The opportunities for accomplishing great deeds or acquiring a great name are relatively less in a small community than in a great city. No man's abilities are so remarkably shining, no man possesses a genius so commanding, that he can attain eminence without a proper opportunity for their development, and some circumstance to recommend them to the notice of the world.

While it cannot be said that Dr. McKay was fortunate in the possession of the capacities, or surrounded by the conditions, necessary to the highest degree of success, you can look at no element of his head or heart that does not appear worthy of admiration, and this Society, which he adorned with dignity of manner, and purity of life, bears testimony to his abilities, to his virtues, and equal honor to his memory.

He was a pioneer in his profession in this community, and from his arrival here his services were in great demand. His life was a splendid example of personal sacrifice and devotion to duty, and his sense of professional responsibility impelled him to work beyond his strength. Finally, the unremitting labors of over a third of a century caused his delicate physical constitution to put forth its signal of distress. About five years

ago the icy fingers of paralysis touched him with its fatal premonition. Yet no murmur nor lament ever shook his lofty fortitude, or passed his lips. He knew his work was done and patiently awaited for the curtain which divides time from eternity to be drawn aside.

On the 28th of February 1918 he passed quietly away, surrounded by his loving daughters, who during his long illness, with untiring devotion and gentle ministrations, had done all that affection could suggest to sooth his suffering, and brighten his pathway to the grave.

Dr. McKay was genial and kindly. He treated all who came to him, rich or poor, exalted or lowly, with the same exquisite courtesy and consideration. To the poor and humble he was always accessible; listening patiently, and never refusing sympathy and aid. He was of a most charitable disposition, not merely in the bestowal of alms, but in the kindness of his heart, and his gratuitous service to the poor. He was a practical Christian. In both his public and private life he bore open testimony to his reliance upon Christianity, and exemplified the beautiful virtues of his religion. His habits were most exemplary and his consistent example for temperance was more impressive than the platform or the pulpit.

He had no political ambition. His modest and retiring nature, and his love of peace and good fellowship, made him shrink from the contentious bitterness and asperities of public life. Yet, he was public spirited, and the cause of education found in him an earnest and intelligent advocate.

It was, however, in the domestic circle, amidst the sweet endearments of home life, that the most loveable and lovely traits of his haracter found their fullest development. In the sanctity of his home was the fulfillment of every desired virtue. But now he has laid down the burden of life, and gone from our presence forever. No more will we see his manly form. No more will we feel his friendly grasp.

"The mighty flood that rolls,

Its torrents to the main,

Can ne'er recall its waters lost

From that abyss again."

"And man, when in the grave,

Can never quit its gloom,

Until th' eternal morn shall wake

The slumber of the tomb."

We have followed to the grave, one who, in old age, and after a long career in life, has, in full maturity, sunk at last into rest. He has passed, it is likely, through varieties of fortune. He has seen families and kindred rise and fall. He has seen peace and war succeed in their turns; the face of his coun-

try undergoing many alterations; and the very city in which he dwelt rising, in a manner, new, around him.

The blameless life, the artless tenderness, the pious simplicity, the modest resignation, the patient sickness, and the quiet death, are remembered only to add value to the loss, to aggravate regret for what cannot be mended, to deepen sorrow for what cannot be recalled.

“Leaves have their time to fall,

And flowers to wither at the north-wind's
breath

And stars to set, but all—

Thou hast all seasons for thine own, Oh! death.”

When death comes early, when it crushes the budding loveliness of childhood, or treads upon the bloom of youth, or even when it tramples on the strength of manhood, the natural grief we feel is aggravated, because the event is as timely as it is severe; and we murmur that it contradicts the order of nature. But when the pale messenger lays his hand upon an accomplished life, a life that has rounded out the years which experience and inspiration assign as the desirable limit of human duration; when these years have been occupied with usefulness, rewarded by success, and crowned with honor; when a good man, having discharged the duties and fulfilled the trusts of life, lies down, calmly and peacefully, to his final repose, we may grieve, but we are not permitted to complain.

The tears of affection may not indeed be kept back, but the voice of reason is silenced. To complain at the close of such a life is to complain that the ripened fruit drops from the overloaded bough that the golden harvest bends to the sickle; it is to complain of the law of existence, and to accuse the creator that He did not make man immortal. For such a life eloquence shall lift her voice, and poetry shall string her lyre. For such a man praise, honor, imitation, but not tears. Tears for him who has failed; tears for him who fainted on the wayside; not for him who finished the journey, tears for him who through his fault or his misfortune, omitted to employ the opportunities that were given to him for the work that was assigned to him not for him who died when he had accomplished that for which he lived.”

“Why weep ye then, for him who having run

The bounds of man's appointed years at last,

Life's blessings all enjoyed, life's labors done,

Serenely to his final rest has pass'd

While the soft memory of his virtues yet

Lingers, like twilight hues when the bright sun
has set!”

We will lament therefore, in no complaining spirit for the

man whose memory we now commemorate. With our griefs that he has died shall be mingled our thankfulness that he has lived. A life so pure, so simple, so strong, so full of grace, so free from reproach, so clear with light, so consistent with reason, so faithful to every trust, needs no encomium. Nothing could be added to it without marring its beauty. Nothing could be detracted from it without impairing its force.

No monument of material substance need be erected in its honor. The simple record of its living actions is the proper measure of its usefulness, and its highest and most appropriate eulogy.

Such was the life of our departed friend, and so long as memory treasures up pure lives and faithful service, as long as public and private virtue is revered, so long will his name be cherished as an example worthy of the highest emulation. The laurel and the bay are nought to him. A monument more precious to his memory has already been founded in the hearts of those whom he loved and served so long and faithfully. In this busy harvest of death there will be gathered into eternity no nobler spirit, no fairer soul.

The death of our friends reminds us of our mortality. Nothing is more evident than that the decay of age must terminate in death. When we contemplate the close of life, the termination of man's designs and hopes, the silence that now reigns among those who, a little while ago, were so busy, or so gay; who can avoid being touched with sensations at once awful and tender? In whose eyes does not the tear gather on revolving the fate of passing and short lived man?

The loss of a friend upon whom the heart was fixed, to whom every wish and endeavor tended, is a state of dreary desolation in which the mind looks abroad impatient of itself, and finds nothing but emptiness and horror. These are the great occasions which force the mind to take refuge in religion. We know little of the state of departed spirits but such knowledge is not necessary to a good life.

"Dust thou'st art to dust returnest,

Was not spoken of the soul."

Real alleviation of the loss of kindred and friends, and rational tranquility in the prospect of our dissolution, can be received only from the promises of Him in whose hands are life and death, and from the assurance of another and better state, in which all tears will be wiped from the eyes, and the whole soul shall be filled with joy.

Suggested by the Chicago Meeting of the A. M. M.

Some years ago after attendance upon a session of the American Medical Association, a young physician remarked to

an elderly one that he always felt depressed after the annual convention because of the many thing he saw and heard concerning which he was ignorant and that he went home feeling that he reall knew very little of the science of medicine. "Cheer up son," said the older man, "there are probably lots of things you know that the rest don't." There are advantages to be gained by attendance at the annual meeting of the American Medical Association which are not to be measured from a strictly scientific viewpoint, and not the least of them is the study of human nature. Physicians as a rule are as human as the rest of the world and their foibles are nowhere more evident than in a great gathering of medical men.

The recent meeting at Chicago was a war meeting, everybody talked war, social functions were replaced by war speeches, and even the war was introduced as a factor in the political struggle for the office of president. A member from a Western State made an eloquent plea for the Navy and cited what great good has been accomplished by Secretary Daniels in his prohibitory amendment to former naval customs and advocated prohibition for the duration of the war, and ten minutes later was imbibing steins of beer in the bar of the hotel. Two distinguished physicians talked learnedly of genetics and the effect of clean living on future generations and immediately after adjournment they both went to a moving picture theatre which had over its door "No ladies or Persons under sixteen Admitted." The physicians in attendance smoked just as much, ate quite as much indigestible food, drank as many cocktails, and found as much fault with the prices charged for eatables and drinkables as an ordinary layman. They flocked about the booths in the exhibition hall when they gave away ice cream, while the scientific exhibit was far from crowded. They collected samples of medicines and souvenirs of the occasion quite as religiously as in former years, but did not subscribe for as many books as usual, and there was a notable diminution in the number of listeners at section meetings where the topic under discussion were not of a practical nature.

Medical politics, a feature which has done more than anything else to alienate that proportion of the profession which cares little for the office seeker was much in evidence. There was an amount of wire pulling for the election of president which was neither dignified nor in accordance with the expressed conviction of the Association—that solicitations of votes for officers is not in accordance with the ethics of the profession.

The appointment of committees and the work done in committee was largely prearranged, and while this may have been conducive to efficiency, in one instance it least it resulted in the

chairman of the committee making his report without consulting all the members of his committee and not entirely in accord with their expressed opinions.

While Chicago may be an ideal convention city, it is not adapted for the meetings of the American Medical Association if the sections are as widely separated as at the last meeting and the executive meetings held at a considerable distance from hotels. Chicago temperature in June is not conducive to long walks, and while taxis are cheap, they were not patronized by the average man as largely as by those whose expenses were paid by State or State organizations.

There was evident an aversion to unsolicited opinion. The House of Delegates with an exceedingly able executive moved like well-oiled clock-work and only occasionally was there a squeak, which promptly subsided with the addition of a little more parliamentary lubricant.

The hotels were as a rule satisfactory, and the charges, save at two of the larger ones, while high were not at present prices exorbitant. The delegates from Oklahoma remarked that where he lived he could get a cup of coffee, two fried eggs and a hunk of bacon for thirty cents, but in Chicago it cost him a dollar and a half, and the waiter thought the change from a two-dollar bill was his tip and thanked him for it.

Next year at Atlantic City the Rhode Island physician who does not attend the annual meeting will miss an educational function as well as an enjoyable vacation, and if he goes will return to his daily grind with broader views of the profession, a more intimate acquaintance with its members, and an incentive to greater effort.

The Pennsylvania Meeting.

W. C. LaMotte, M. D., Secretary,

Delaware State Medical Society.

2011 Monroe Place, Wilmington, Del.

Dear Doctor LaMotte:—

The members of your Society are cordially invited to attend any or all of the meetings of the Medical Society of the State of Pennsylvania during the annual session at the Bellevue-Stratford Hotel, Philadelphia, September 24-26.

The August issue of the Pennsylvania Medical Journal containing the preliminary program will be sent to the officers of your Society and to any of your members who may request the same.

Your members who may honor us with their presence are requested to register as visitors and members of the Delaware State Society. They will then be given badges, programs and invitations, and entitled to all the privileges of members of our

own society.

Hoping to have the pleasure of meeting many of your members during our Philadelphia session, I remain,

Faithfully yours,

C. K. STEVENS, M. D.

Secretary.

Utilization of Platinum in Unused Instruments.

1. In view of the limited supply of platinum in the country and of the urgent demand for war purposes, it is requested that every doctor and dentist in the country go carefully over his instruments and pick out EVERY SCRAP OF PLATINUM that is not absolutely essential to his work. These scraps, however small and in whatever condition, should reach Governmental sources without delay, through one of two channels:

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By giving this immediate attention you will definitely aid in the war program.

2. It is recognized that certain dental and surgical instruments requiring platinum are necessary, and from time to time platinum is released for that purpose. It is hoped, however, that every physician and every dentist will use substitutes for platinum for such purposes wherever possible.

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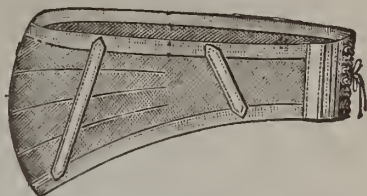
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Pneumonia

The high percentage of deaths from infection by the *streptococcus hemolyticus* complicating pneumonia, warrants our calling attention to the importance of

1st. IMMUNIZATION

Preventing infection with an appropriate Serobacterin or Bacterin. Reports from physicians in charge of medical work connected with industrial institutions, boards of health, and general practitioners, abundantly justify the prophylactic use of a suitable Serobacterin or Bacterin containing the organisms isolated from the present epidemic, in preventing influenza and pneumonia.

The Conference held at the British War Office, October 14, 1918, Col. Sir Wm. Leishman, Chairman, reported in favor of immunization and treatment of infections with suitable bacterins.—See British Med. Jour., Oct. 26, 1918, p. 470.

2d. TREATMENT

In streptococcus pneumonia the early use of Antistreptococcic Serum Polyvalent administered intravenously, in full doses (100 to 200 mils), repeated every 8 to 12 hours as indicated. This serum contains the antibodies against the different streptococci isolated from the present epidemic. Especial reference is made to the *streptococcus hemolyticus*.

In pneumococcus pneumonia the early use of Antipneumococcic Serum Polyvalent administered intravenously in full doses (100 to 200 mils), repeated every 8 to 12 hours or as indicated. The superiority of Polyvalent Serum was proven in a series of cases treated with Polyvalent Serum and a series treated with Type I Serum only, when found due to be Type I Pneumococcus infection. See report by Medalia and Shiff, M. C. U. S. Army, Jour. A. M. A., Nov. 30, 1918, p. 1821.

In mixed infections the conjoint use of both sera is indicated.

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Delaware State Medical Journal

Official Organ of the

Delaware State Medical Society

FOUNDED 1789

Editor

DR. W. EDWIN BIRD

907 Delaware Ave.
Wilmington, Del.

Business Manager

DR. J. W. BASTIAN

915 Washington Street
Wilmington, Del.

Assistant Editor

DR. T. H. DAVIES,

Marshallton, Del.

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EDITORIAL

MINUTES OF THE HOUSE OF DELEGATES, NOV. 18, 1918

The 129th Annual Session of the Board of Councillors and House of Delegates of the Delaware State Medical Society convened at 8.30 p. m. on the above date at the Municipal Building, Board of Education rooms, with the President, Dr. G. W. K. Forrest, in the chair.

The following business was transacted:

Roll call, with the following members present:

Henry W. Briggs, Councillor.

Kent County—I. J. McCollum, J. W. James.

New Castle County—John Ball, William Wertenbaker, Harold L. Springer, Joseph P. Wales, John Palmer, George C. McElfatrick, Henry J. Stubbs, Joseph W. Bastian.

Sussex county—James Beebe, Robert Hopkins.

The minutes of the last session were read, and accepted as read.

On motion, a nominating committee was appointed by the chairman, consisting of the following: James Beebe, I. J. McCollum and H. L. Springer. The following names were submitted and unanimously adopted:

First vice-president, John Palmer; second vice-president, E. S. Dwight, third vice-president, H. R. Burton; secretary, W. O. La Motte; treasurer, S. C. Rumford; councillor, H. W. Briggs.

Delegates to the American Medical Association, P. W. Tomlinson; alternate, Robert Hopkins.

Trustee of the Delaware State Medical Journal, H. J. Stubbs.

Committee on Scientific Work, T. H. Davies, P. S. Downs, W. O. La Motte.

Committee on Public Policy and Legislation, H. R. Burton, L. H. Ball, Luther Conwell.

Committee on Medical Education, H. W. Briggs, J. W. James, W. F. Haines.

Committee on Necrology, J. A. Ellegood, J. W. Bastian, William Wertenbaker.

Ten names to be submitted to the Governor for his selection of three to serve on the State Board of Medical Examiners, William Wertenbaker, G. F. Jones, H. L. Springer, James Beebe, I. J. McCollum, S. C. Rumford, G. W. K. Forrest, C. de J. Harbordt, J. M. Martin, J. W. Clifton.

Delegate to the Pennsylvania State Medical Society, R. G. Paynter.

Delegate to the New Jersey State Medical Society, L. A. H. Bishop.

Delegate to the Maryland State Medical Society, George C. McElpatrick.

Delegate to the New York State Medical Society, W. K. Kraemer.

The following report of the treasurer and auditing committee was presented and accepted:

Balance on hand Oct. 8, 1917.....	\$454.66
1918	
Jan. 4. Dover Bank dividend.....	17.50
Apr. 17. New Castle County Society.....	141.00
July 8. Dover Bank dividend	17.50
Sept. 20. Sussex County Society	75.00
Nov. 16. Kent County Society	54.00
Interest	13.10
	—————\$772.76

Check No.

107 Star Publishing Co.	\$ 15.00
108 Keystone Badge Co.	4.05
109 Helen Shalleross	51.00
110 G. W. K. Forrest	3.50
111 M. C. Repp	17.70
112 Julian Robinson	8.60
113 T. H. Cappeau	4.50
114 Star Publishing Co.	45.00
115 G. L. R. Thompson Co.	8.50
116 Star Publishing Co.	45.00

117	Star Publishing Co.	45.00
118	G. L. R. Thompson Co.	1.75
119	St. Louis Button Co.	6.75
120	W. O. La Motte	8.00
		—————\$264.35

Balance on hand Nov. 18, 1918\$508.41

There is also a credit of \$304.98 with the Wilmington Savings Fund Society to be used for defense purposes. No deposit has been made to this fund this year. \$90.00 to be deposited.

(Signed) SAMUEL C. RUMFORD,
Treasurer.

We, the Auditing Committee of the Delaware State Medical Society, have examined the accounts of the treasurer, as herewith submitted, and find same correct, there being a balance in bank of \$508.41 and a defense fund of \$304.98.

(Signed) G. W. K. FORREST,
H. W. BRIGGS,
W. O. LA MOTTE.

Nov. 18, 1918.

Report of National Association of State Medical Examiners was made by Dr. H. W. Briggs, in which he said that an effort was being made whereby reciprocity between a larger number of states could be effected, also that a more practical examination, such as examination of patients in hospitals, were being made.

Dr. Stubbs, President of the Board of Trustees of the State Medical Journal, reported and advised that the Journal be continued. Dr. Bastian moved that the Journal be continued another year, issued quarterly, expenses to be left to the Board of Trustees. The motion was carried.

Dr. Wales moved that an Emergency Defense Committee, consisting of three members from each county, be appointed by the president to act in an advisory capacity in case of any public health matter. The motion was seconded by Dr. Springer, and passed. The president appointed the following members:

New Castle County—J. P. Wales, J. W. Bastian, H. L. Springer.

Kent County—C. de J. Harbordt, I. J. McCollum, J. W. James.

Sussex County—James Beebe, R. B. Hopkins, G. F. Jones.

The secretary read a communication from the Medical Society of the State of New York relating to health insurance, which stated that the House of Delegates recorded itself, by unanimous vote, as opposed to health insurance. Dr. Bastian moved the House of Delegates go on record as opposed to health insurance and that the committee on public policy and legisla-

tion be instructed by the secretary to keep in touch with any legislative movement regarding this action. The motion was carried.

A card from A. L. Bailey, City Librarian, requesting a copy of the proceedings of the annual meeting of the society was read and the president requested Dr. Bastian to place Mr. Bailey on his mailing list of the State Medical Journal.

On motion Dover was selected as the next meeting place, the second Tuesday in October.

The meeting then adjourned.

Note—At the General Session, November 19th, all bills when approved by the Finance Committee were ordered paid.

W. O. LA MOTTE,
Secretary.

MINUTES OF THE SCIENTIFIC SESSION, NOV. 19, 1918

Invocation—Rev. Charles H. Bohner.

Address of welcome—Josiah Marvel, Esq.

Dr. G. W. K. Forrest delivered the presidential address, which was not discussed.

Dr. W. O. La Motte, the secretary, presented the report of the House of Delegates.

A motion was made, seconded and carried that the report be accepted, with the addition that all bills approved by the Finance Committee be paid.

A motion was made and carried that a vote of thanks be extended to the Y. M. C. A. for the use of the room.

The following scientific papers were read:

Chronic Foot Strain: Harold L. Springer.

Typhoid Fever: Henry W. Briggs.

Drug Addicts: William H. Kraemer.

Shell Shock: M. M. Tarumianz.

Gastroptosis and Visceroptosis Combined: George C. McElfatriek.

The session was concluded as follows:

Dr. G. W. K. Forrest, Wilmington: Gentlemen, this completes the program for today. I certainly want to thank Mr. Bohner, who made the invocation for us today, and also Mr. Marvel for his eloquent address, and also our own men who have taken such an active part in this meeting, and our new secretary, Dr. La Motte, and I particularly want to congratulate the men who presented the papers this year. I want to thank you all for your support, and trust that next year there will be more volunteers for papers. Therefore, gentlemen, I will declare the nominations open for the election of president for the ensuing year.

Dr. C. J. De Harbordt: I take great pleasure in mention-

ing one of our war-horses in Kent county, a gentleman who has been for many years a member of our society, who has always always taken an active part and who has a reputation beyond reproach—Luther S. Conwell.

Dr. Wwight: I second the nomination.

Dr. P. W. Tomlinson: I move the nominations close, and that the secretary cast the ballot for Dr. Luther S. Conwell for president of this society for the ensuing year.

Dr. J. W. Bastian: I second the motion.

Carried.

Dr. Conwell was unanimously elected by a standing vote.

Dr. Luther S. Conwell: Something like fifteen or eighteen years ago, I do not know exactly, but it was when I was a younger man than I am now and a more recent member of the society, I happened to be at Rehoboth and I was struck by the number of those present who were not ex-presidents of the State Medical Society and they told me, the doctors who were present from Kent county, "Well, you are to be congratulated upon the ease and facility with which you can attain to the presidency," but an overwhelming sense of responsibility killed all the joy that I could see, and I had to beg that society to violate its usual and almost universal custom of electing a president who was not present, and as is frequently the case, I thought that I had let my opportunity slip, and in the fourth and succeeding triennials in which Kent county was slipped around and someone else has been made president, I was just a little afraid that my chance was gone, but the sense of responsibility has not all gone yet, gentlemen. While the desire, the ambition to get my name upon that list of honorable ex-presidents of the Delaware State Medical Society has been increasing, the sense of responsibility for the proper conduct of the society's business which devolves upon the president for one year has not very much diminished. If I had been as useful a member of the society as the retiring president, Dr. Forrest, I could count on the enthusiastic support of the members. The physicians of Wilmington certainly show that they appreciate Dr. Forrest's long years of usefulness to the State society, and I hope that I can find somewhere near as attractive a program as he has had today, because I consider it is one of the most useful and practical programs that we have ever heard from the State Medical Society. It is not necessary to go into the various papers, but I feel something like the boys who are coming back from the trenches, two or three of them covered with mud and blood and cooties, and yet they were singing "The End of a Perfect Day." So if you all feel as delighted

as I do upon the honor that you have conferred upon me, I feel that it is "the end of a perfect day." (Applause.)

Adjourned 2.20 p. m., following which the annual luncheon was served at the Café Nobis.

Address of Welcome

By Josiah Marvel, Esq., Wilmington

It is a very great compliment, of course, to be invited to participate in what I believe is the one hundred and twenty-ninth annual meeting of this Association. I doubt very much whether there is anyone here who remembers when it began, although I see some whom I have known so long that it appears that both they and myself are almost old enough to remember when the Association began. And, of course, it is a very rare and abnormal situation which I am in, being called upon to welcome a doctor. You are, as you know yourselves, recognized in the community as a necessary evil, rarely indeed have you been welcomed to anybody's house. I began, perhaps foolishly, to welcome a doctor to my house, the old man is sitting back there now, twenty years ago and in the course of time—it seemed to me very long—he said to me: "It is a boy!" This continued with a repetition until he became no longer a welcome visitor in my house. We don't want to see him any more. (Laughter.) It would be pleasing to me and perhaps interesting to some of you, if instead of making an address with short breath arising from hurrying upstairs, I could reminisce as to the individual members of your Association. When I go back twenty or thirty years, knowing some of you all my life, knowing some of your personal relations, your individual connections here and there, I doubtless know many things of many of you that would be interesting to you all. I see John Ball there; I don't see his brother; he is busy with other things, apparently, this morning. I remember very well when I was at school at Falkland and had that deadly disease in which the

*Delivered before the Delaware State Medical Society, Wilmington, Nov. 19, 1918.

rash encircles the body, and knowing, as I was told, that when they met around me that I would die, Swithin Chandler with a little powdered chalk and cream saved my life. (Laughter.) I remember that just at that time he was the Speaker of the House at Dover and wanted a man for Selbyville. Someone recommended Louis Heisler Ball. He engaged a boarding house and was ready to settle and become a Sussex county man. Then Swithin Chandler changed his mind, conveniently died, and left him his practice. There are many other things that to me would make a very pleasant reminiscence, but that time is not now. I am somewhat of a stranger in such a midst of doctors as this, but yet I approach my relations to you in this connection with a bit of a feeling that I am almost a member of your tribe because I was very much interested as a youngster in the practice of medicine. I remember as a boy on a Sussex county farm that I studied what was then the most popular book on medicine throughout the farm houses of Sussex county. I studied it to the extent that I felt I could diagnose any disease that was known to the inhabitants of Sussex county, and I discovered how easy the science was, that the remedy and panacea for every ill was Ayer's Sarsaparilla. Of course, when I found the next most popular textbook on that subject I was a bit embarrassed to establish the right relation between the mind of one doctor and another, when I discovered that this other doctor prescribed as a remedy for all the ills to which flesh is heir, somebody's Pink Pills for Pale People. (Laughter.) So that cured me to an extent, but not entirely because I still wanted to practice medicine. I remember my inclination and feeling of the neighborhood was such that I was a young man who served as the resident physician to the neighborhood. I pulled teeth, opened boils, and made poultices, etc., and the greatest surgical operation was one that came out of negro scrap and one of the negroes on the farm had about a four-inch cut, and having been somewhat of a cobbler, I took my shoemaking tools and sewed up the wound and with a little salt meat grease he came through. So I qualified as an army surgeon in these days. I recall as a young man my grandfather, old Eli Pepper, decided that my place was in the West. I went to a place in Nebraska and started, and concluded that I ought to go to Omaha and it was on that trip

that three words from a man defeated my plan and kept me from being a doctor. I traveled towards Omaha as long as my money held out and then endeavored to work the rest of the way. I got out on a farm and asked a very black bewhiskered man if he could give me work. He asked me what I could do; I said anything from pitching hay to practice of medicine. He said "That is just what I want." I asked, "What, practice of medicine?" His reply was, "No, pitching hay." So I feel somewhat at home. I feel somewhat at home because of the personal relations to the medical profession that I have recited, and secondly, because of my relations to you as citizens of Delaware. I can welcome you at this time earnestly and honestly. I can welcome you in both relations—as doctors and citizens of the State of Delaware. No group of men can meet at this time without having in their minds, expressed or unexpressed, the great and tremendous impression that comes upon them out of our relationship to each other and to the world. Only a few weeks ago we were thinking in terms of cannon and guns and sabres and swords and powder and ammunition of war. Now we are thinking in terms of peace. We see throughout all our country a sort of a hush, a sort of a silence, a sort of an interlude arising, as I can see, out of the fact that citizens everywhere recognize the immensity of the change which has come about in the world in the past two weeks, and the immensity of the problem that we as citizens of this community, citizens of Delaware, citizens of America and citizens of the world are bound to meet. We must recognize that in this great world catastrophe that there have been world effects and world changes such as the world has never seen before. We, now that the war is over, are beginning to take account of stock. It is impossible to complete it for weeks or months, perhaps for years, but we do know this that at least \$200,000,000,000 have been used and spent in simple munitions of war. We know that that \$200,000,000,000 of government money throughout the world has got to be paid back. We know that the assets of the world are mortgaged to pay that back, and the assets of the world means the assets that are in your pockets and in the pockets of men throughout the entire world. That, however, is only a beginning in the calculation. Then all the desolated fields of France, of Belgium, of Italy, then all the

desolated towns and homes, and then begin, if you can, to calculate the destruction in our war of those assets, all of which are charged against the debt of the world, which has got to be paid because of this great world wide catastrophe. Every normal human life is an asset to the world. Every human life goes through earning something more than he consumes in clothing and shelter. He may not save and accumulate it, but the world gathers that man's accumulation, and it is added to the world's assets. Now when that possible asset-accumulating power of millions of men throughout this world is lost, broken up, you can begin to calculate the further destruction of the assets of the world by the loss of life. All of these things we properly charge to that savage foray of Huns who were moved by a feeling of savagery that the world has not seen since the cave-men ceased to exist. We stand in awe, and silence, when we think of the statesmen of the world meeting somewhere in Europe to sit in judgment on this nation, and reach a just conclusion as to how that nation shall be penalized because of its action. You and I know that their moral debt can never be paid. They can never pay for the pain, the suffering and the shame, because of the outraging of women, the murder of children, for the sacrificing of men. In just what way the world conference can sit and put a punitive damage on that great empire to pay for that, I do not know. The important thing they have got to consider is their dollar debt to the world for the destruction of assets in the last four years. If they were all charged to that people, then every German for generation after generation would feel that he would have to struggle and to give, knowing that the sins of the fathers had been visited upon the children unto the third and fourth generations. Just how it can be measured and what will be impossible to be paid, I do not know, but as I say, we stand in simple awe at the immensity of the problem which will face our representatives and the world's representatives in the conference that is still to come; but we know in all this transfiguration of the world's affairs it will be never again just as we have lived before. What the changes will be we cannot forecast, but we do know that the whole world in its forces are now in flux. They are soft and ready to be moulded into some shape to last generation after generation to come, and we know that it depends upon

the wisdom of mind as to just what shape the mould of the affairs of the world will take, and in a shape that is sound, in a shape that is still, so that our children throughout all time to come perhaps will take the world as we shape it and leave it unto them. These problems, however, are problems that are before our statesmen and before us as citizens. These are world problems of government. To be sure, doctors do sometimes participate in governmental matters. As a lawyer recognizing the fact that this is a government of law, I joined with a number of my profession in thinking it ought to be a government of lawyers. Between the two political parties of this State one chose that view of it and suggested that two lawyers should be sent to Washington to participate in governmental affairs. Another political party suggested two doctors and the doctors won. But there is another thought to this matter of future problems that comes to you as doctors, and it is a matter that I think as a layman I can suggest to you, leaving it to you in your wisdom, guided by your personal experience, guided by your professional experience, and you will in your way find a way of carrying it out. We realize that the unscrambling of this great war in our own country is a great problem. Just how the government is going to let go all the accumulated powers that have been collected for the war, we do not know. But this we do know: that the result of four million men coming back to the country is going to effect things. One out of five of our population when this war is over will have seen some military discipline. They will have been in camps, in cantonments where their individual judgment as to their health was not the governing judgment. They have learned to realize the fact that the Surgeon General says that is the thing to be done and this is the thing to be done, and they have learned that the judgment of that medical man is wiser than theirs, and that it is their duty as men—due to themselves and the government—they want to serve, to follow the rules and regulations laid down by that doctor. When these men come back to our community you will find they will bring back with their soldier habits thoughts of that very thing, so that they will come to you doctors and say: "Sir, I am not satisfied that you should simply practice therapeutics. It is your duty to practice prophylaxis. It is not right when

I send for you that you give a pill or powder, and depart. If you see those things which will make for the better health of that child it is your business to advise me." I realize that some of you from time to time have been able to practice prophylaxis. You have been able to say that sanitation is bad, that food is bad, you must correct it if you want this child to keep well, but I realize that your power has been futile, your advice sometimes has been lost, and at times perhaps you have been discouraged, saying, "What is the use, they won't do what I say;" but gentlemen of the medical profession, sentiment in your community as well as mine will be changed in that respect. You will find that these men, one out of every five, will respond to your judgment and it will be your province and duty to see that the things are done that will make for the general health and welfare of those families you attend. Of course it is going to be easy for you because of this, and most of the other men who in the study of this war problem have seen that certain illnesses can be prevented. You know the story of the young man who applied for a commission in the Army Medical Corps; he was asked, "What do you know about the army treatment of typhoid fever?" and the young man, embarrassed, replied, "I don't know." The examiner responded, "Sir, we don't treat typhoid fever in the army; we prevent it." I know it can be done. I know the story of '98. I know the story of this war as applied to this particular question and others of a similar kind. Therefore when you come to me and say you want to prevent typhoid by sanitation and inoculation I will respond to it and these soldiers who come back will respond to it infinitely more. So, gentlemen of the medical profession, as a member of the community recognizing the value of every life to this community, realizing that you as doctors have your duty, as well as statesmen, in formulating interest for the welfare of the government, that it becomes your duty to proceed from now on with a regard for the prophylactics in medicine such as you have never had before and unless you do, as members of this medical profession you will not be doing your duty either as doctors or citizens of this State.

Presidential Address; On Influenza

By G. W. K. Forrest M. D., Wilmington

Fellow Members of the Delaware State Medical Society:

You will pardon me, I am sure, if I preface my brief remarks today by expressing my great appreciation of the honor you have conferred upon me this past year in electing me your president. This position causes a glow of pride to pervade my whole system; it feels circulatory, but possibly is mental. Who should not be proud of the privilege of presiding over such a body, one of the oldest medical societies in the United States, and today I see before me the leading men in the profession in Delaware, representative of the State.

One not in the habit of writing hesitates for a choice of subject; that has been my predicament. I had thought to criticize our body for its inactivity in taking the initiative in affairs pertaining to the public health and welfare, having in the past left such matters to the laymen. I had thought, also, to have regretted our lack of interest in the success of our society, as has been evidenced in the past by the few participating in its activities, such as the Delaware State Medical Journal, the annual program, the various committees and delegates, etc. I had hoped that my feeble effort might persuade at least a few more to aid in forming a closer and more active union in our small society so that it might become a factor for much good, not only for ourselves, but for the general public of Delaware. To use a favorite expression, "In union there is strength." Do you think that the great war would have been won by the United States and her Allies if one nation had all the burden thrown upon it? By no means, it meant concerted and combined effort on the part of all, and shirking on the part of none to have effected the final and complete victory for the forces of liberty, for which let us thank the All Divine. May we take the lesson to heart, and in the future do our utmost to make this society of ours one to be prouder of than before.

But about the time we had thought to hold our annual session, the epidemic of the so-called influenza struck us over night, and those of us who remained well were too much occupied to have had more than a dozen at the meeting. There-

*Read before the Delaware State Medical Society, Wilmington, Nov. 19, 1918.

fore the Committee of Arrangements decided to postpone the session until today.

I have just spoken of the "so-called" epidemic influenza. At the time we thought that the infection seemed to be more particularly of the nature of pneumonia, and since then we have seen no reason to change our opinion. Many seen did not fail to show some clinical manifestation of pneumonia, excepting in the very mildest of attacks which terminated in recovery in less than 48 hours. Invariably those whose temperature persisted after three days, and oftentimes those who had reached normal, showed at some time in the course of the disease evidences of a broncho-pneumonia, such as areas of dullness on percussion, rales, and bronchial breathing. These areas, large or small as the case might be, in the bulk of instances were found posteriorly, usually at the upper edge of the lower lobe, no predilection being shown for one side over the other. Frequently these early areas spread rapidly through the lungs until in many cases in a few hours a true picture of lobar pneumonia presented itself, if the physical signs might be taken as an index, although I question whether a true lobar pneumonia occurred as a sequelae of the infection.

Unfortunately we were unable to have made bacterial studies of cases. But the statement that the infection seemed to be one of pneumonia has been more than proved by investigators. Allow me to quote from the Journal of the American Medical Association, November 9, 1918, a summary of Nuzum's paper, page 1565: "The influenza bacillus was isolated in only 8.7 per cent of the cases, and chiefly from a small number of soldiers. Pneumococci were the predominating organisms in the sputum, throat cultures, and in the lung cultures, both during life and at necropsy. Pneumococci of unusual virulence were the most important early secondary invaders, and have sufficed to cause many of the fatal pneumonias."

Journal of the American Medical Association, November 9, 1918, page 1565. Christian:

"In 126 consecutive fatal cases of epidemic influenza not a single patient failed to show physical signs, justifying a clinical antemortem diagnosis of broncho-pneumonia.

"In 22 consecutive necropsies, no single case failed to show pathologic changes in the lung justifying the diagnosis on the part of the pathologist of broncho-pneumonia.

"Clinical study of non-fatal cases of epidemic influenza justify the belief that with very few exceptions, patients with fairly severe to severe cases have broncho-pneumonia."

Journal of the American Medical Association, November 16, 1918, Friedlander:

"During all stages of the epidemic, examinations have been made to establish the identity of the responsible organism.

"Smears and cultures of sputum of influenza patients have uniformly exhibited the pneumococcus as the predominating organism.

"Cultures from swabbings of the throat and naso-pharynx of influenza patient exhibited pneumococci in 54 per cent, and hemolytic streptococci in 4 per cent of all examined. In none of these cases were influenza bacilli demonstrated.

"Cultures obtained at necropsy from various thoracic and abdominal tissues and fluids indicated the presence of the pneumococcus as the dominating organism in 53.3 per cent of the bodies examined post mortem, while in 46.7 per cent streptococcus hemolyticus was the outstanding organism.

"The persistent absence of influenza bacilli in the deverse materials examined militates against attributing this epidemic to the Pfeiffer organism. More consistently have the cultures yielded growths of the pneumococcus, to the end that significance is to be attached to the pneumococcus-streptococcus group of organisms as a dynamic factor in this epidemic."

At the beginning of the epidemic, really before it had become epidemic, we saw some unusual conditions. I have in mind one, a man of 50 years, who came to my office suffering with hiccoughs which had been present for two days. Upon examination we found him to have a normal temperature, pulse 88; respirations 20, and a slight cough; percussion showed dullness over the lower posterior lobes of the right lung with bronchial breathing and sharp rales. We sent him into the Delaware Hospital and had the right posterior side dry cupped upon which the hiccoughs immediately disappeared. The next day the temperature was 101, pulse 90, respiration 22; all these remained at this point for three days when normal was again reached. Three days after this the patient suffered an attack of acute mania which disappeared in about four days. In all, during the epidemic I saw about six cases of acute mania, all but one clearing up in about three or four days. The one, I believe, died in one week from starvation; she had not remained under our care.

Case 2: A woman of 65, was visited during the night for the first time, when I was told over the telephone that she was suffering from a heart attack. Upon examination I found a normal temperature, pulse 78, but irregular and intermittent, full and bounding, respiration 46, dullness on percussion over the base of both lungs posteriorly with decided bronchial breathing over these areas; blood pressure next day, systolic 120; diastolic 70; urine, negative. Died in three weeks, during which the consolidation spread gradually over almost the whole surface of both lungs. Temperature remained normal or sub-normal during the whole period, with a progressively increas-

ing dyspnea; a rusty mummular sputum continued from the third day to the end.

Case 3. Male, 72. Outdoors on porch when first seen. complained of shortness of breath. Temperature normal, pulse 100, respiration 35; dullness on percussion posteriorly over lower left base with bronchial breathing and rales. Within 24 hours temperature had reached 104, pulse 110, respirations between 50 and 60, decided difficulty in breathing, death in less than 36 hours from time first seen.

Case 4. Female, 11. Had an apparently mild attack, temperature had been normal four days when sudden collapse occurred. Upon seeing child, she had a typical meningeal cry, Kernig's sign, etc. Chest examination revealed consolidation extending over almost the whole of right lung posteriorly, temperature 105, pulse 160, respiration 50. This child cleared up of the pneumonia in ten days, but she at present shows evidence of much cerebral pressure, and is desperately sick, seven weeks from initial attack.

The onset of the disease is sudden, with chills, and the patient complains of severe pains in the head and lumbar region and dull aches throughout the body. Temperature usually 102, pulse not proportionately increased, with much prostration, and complete loss of appetite. Respirations in early cases about 20. These symptoms remain for three days, and at that time either end by crisis or rapidly change into a pneumonic stage. Epistaxis and hemoptysis were frequent in the more advanced cases. In the severe cases sore throat was common.

The above condition is that we met in the height of the infection, but there seemed to be various degrees of the infection, either due to the strain of the infecting organism, or due to the resisting power of certain individuals to invasion of disease. All of you have seen the mild type, which consisted of a coryza and pharyngitis, and up through the progressively increasing severity of infection until that form of attack was seen that was of an acute fulminating type in which the patient apparently drowned in his own secretions within 24 to 48 hours. This type was horrible to see, as the sufferings were intense, the patient making every effort imaginable to overcome the asphyxiation, and remaining conscious until just before death, with absolutely clear mentality. I need go no further in detailed description of the types and degrees of the infection, inasmuch as all of you have seen the same. I need only say that the visitation to me seems like a horrible nightmare, one that we could not prevent nor aid.

A prognosis in infected persons was impossible. Here we met one of our greatest problems, as the outcome of any individual case was very uncertain. Cases with apparently mild infection, at times either slowly or rapidly progressed into a

hopelessly fatal one, and that in spite of all precautions and treatment although we felt that many fatal terminations could have been avoided should the patient have remained in bed for the sufficient length of time advised. Other cases with an apparently severe infection from the first, with a typical bronchopneumonia, with much prostration, anorexia, etc., have cleared up in a comparatively short period. The prognosis was never in doubt in those of asphyxiative type, the patient dying in spite of all that might be done.

Unfortunately no specific line of treatment is known, each case being treated symptomatically; for fever, a mixture of potassium acetate or citrate; for pain or cough, a narcotic, either codein or Dover's powder; stimulation by digitalis, strychnia, caffein, atropin, as indicated. Whiskey was used more for its sedative effect than as a stimulant. Of course the bowels were kept active, and a diet pleasing to the individual permitted, inasmuch as the appetite had to be coaxed.

I have arrived at the conclusion that there are two classes of the infection: One that will get well and one that will die, and these end-results despite all treatment.

Shell Shocks at the Front

By M. M. Tarumianz, M. D., Farnhurst.

Shell-shock, shock, or warshock are essentially the same war psychoneurosis. Apparently, this great war has created some new diseases, like trench fever, trench nephritis and so on, but in the sphere of the psychoneurosis no new disease has been discovered. The only difference which is to be found in this disease in former wars and this war is in the degree and in the large percentage of cases. Shell-shock, or emotional war psychosis, has been given prominence on account of its prevalence, and the hysterical symptoms which have followed high explosions. The same symptoms have been observed after shrapnel wounds, and so on. We have different groups of this so-called shell-shock. The subject of one group shows signs of cerebral or spinal lesions, generally a paralysis (monoplegia, hemiplegia, paraplegia). If we make a lumbar puncture in these cases, we will find blood in the cerebrospinal fluid. This indicates a hemorrhage in the central nervous system, which must be considered a direct effect of the explosion, that means, of the changes of the atmospheric pressure,

resulting from the combustions of great explosive substances. Often we find external hemorrhages (nasal or auricular) produced by the same cause. On the other hand we have a group which includes by far the most cases. In this group there are no signs of external violence or of any organic lesion and no hemorrhage. The victim of the explosion loses consciousness, remaining in a state of confusion for a few days, after which he becomes lucid, asthenic, and emotional. This condition may last for weeks or months, with or without complicating functional symptoms, like deaf-mutism, paralysis, tics, contractures, and so on. We know that a psychoneurosis can be produced by external conditions, acting on a mind, which is several degrees more sensitive than that of the normal persons. In accordance with my own experience, I agree with Elliot Smith, who says: "It would be a gross misrepresentation of the facts of the case to label all the soldiers who suffer from mental troubles as weaklings. The strongest men when exposed to sufficiently intense and frequent stimuli may become subject to mental derangements. It is quite common to find among the patients suffering from shock, senior non-commissioned officers, who have been in the Army for fifteen or twenty years, and have stood severe strain. Such men can hardly be called weaklings."

War-shock, which name is used first by the late Captain M. D. Eder, of London, is hysteria, occurring in a person free from hereditary or personal psychoneurotic antecedents, but with a mind more responsive to psychical stimuli than the normal. The terrible mental strain of modern warfare, acting upon the sensitive mind, determines the disease among soldiers. The symptoms are varied, as palsy, analgesia, amblyopia, mutism, deafness, vomiting, diarrhea, insomnia, and loss of memory.

As said before, war-shock is a variety of hysteria where the psychic trauma is a larger factor than predisposition.

I chose as the title of my paper "Shell-shock and Shock at the Front," as my own experience and observation of most cases of this kind have been at the front, although of course, I had opportunity to study some cases at base hospitals too.

I served as regimental physician in the Russian Army from the beginning of the war. The first three months I had only one battalion under observation, but when the doctor of another battalion was wounded his battalion was added to mine. Living so closely with the soldiers, I had ample opportunity to study their psychology before and after attacks. After the first terrible battle, when we were advancing far into East Prussia five hundred wounded were brought in in one night. Among these, about twenty suffered from shell-shock, only two

showing signs of external violence. The symptoms of the others were varied, most of them showing all varieties of hysteria and I agree with the late Captain Eder that a useful division would be: First, "conversion hysteria of Freud," where the somatic disturbances focus the attention of the observer, and second, "anxiety hysteria," where the psychic elements predominate. In both forms the physic and mental symptoms always co-exist, and it is the mental state which demands explanation and requires treatment.

A few of the cases under my observation were brought to my dugout in an unconscious condition, which was followed by a confused state, taking the form of stupor, or a dream state. In this last-mentioned state, a person hears cannons, machine guns, and sees Boches on all sides.

In most cases, this condition lasted for a few hours, except two cases, who remained in a stupor for two days, and whom I was obliged to send to a base hospital in that condition. Cases of this kind, William describes under the title, "Hypnosis of Battles."

The transition from that stage occurs abruptly. All of a sudden the patients recognize their surroundings for a few minutes, after which they show grave functional and psychic symptoms.

In many cases the first symptoms were vomiting, nausea, severe headache. A small percentage showed hyperesthesia. On one of my patients a pin-prick produced most violent spasms. Anesthesia and analgesia were very common, especially accompanied by functional motor disturbances. One of the patients recovering from unconsciousness found he had lost power in his left arm and leg, and after six hours he had lost his speech. A young officer was blown into the air by a shell, and consequently became deaf in both ears. There was no history of previous ear trouble, and the examination was negative. His sight, taste, speech, writing and reading were normal. This patient was sent away, and three months afterwards, I heard that he regained his hearing under treatment of suggestion.

Most cases under my observation showed tics in the muscles of the face, neck and shoulder, and blinking of the eyes was quite common. Time doesn't allow me to go into the details of each case. Permit me, therefore, to conclude with a narrative of my own case.

During one of the most sanguinary battles, I received orders to retreat at once, but having many seriously wounded soldiers under my care, I had to remain in my dugout four hours longer. Rather than stay and become a Hun prisoner I took a chance to pass through roads and fields, which were

under violent fire of big guns. Accompanied by my nurse and sanitars, we attempted to crawl from one big shellhole to another. Soon I found myself completely alone, as my sanitars were either killed or wounded. As I was coming out of a hole, a shell exploded near me, and the last sensation I had, was of being thrown high into the air. As I was told afterwards, one of my sanitars found me late in the afternoon, in an unconscious condition. I had been thrown into a large shellhole, to which circumstances I probably owe my life. I was taken to a doctor's dugout and later to a base hospital, where my case was diagnosed as traumatic psychoneurosis, with the possible complication of myelitis traumatica, caused by air concussion.

I remained in a state of stupor, with loss of speech and memory for a few days. Other symptoms were: Constant severe headache, blinking of the eyes, ties in the muscles of the face, neck and shoulder, hyperesthesia, reflexes increased, paraplegia, retention of urine, and difficulty with the bowels; also frequent myoclonic spasms of face and shoulder, with a tendency to elevate the shoulder. Babinsky reflex positive.

After a week in the base hospital I was sent to Petrograd, and later to Moscow, in special hospitals, where I was treated for shell-shock. The treatment of mine and similar cases may be outlined in a few words. In the first place; isolation of the patient, absolute rest in bed, with all the sleep possible. Reconstructive medication, utilizing all the dietetic, medicinal and physical therapeutic resources, as hydrotherapy, electrotherapy, massage, and so on. An unexpected emotional or physical counter-shock helps greatly, but the principal treatment falls to psychotherapy. Under treatment by suggestion, the patient must be convinced that the symptoms, which he presents, are curable. If suggestion and persuasion do not show results, suggestion under hypnosis should be tried.

The majority of French authorities, especially Babinsky, recognize the value of hypnosis in the treatment of the war psychoneurosis. Usually the simple method of Braid is quite sufficient (an ophthalmoscopic mirror being held before the patient's eyes for a few minutes), the stage of drowsiness was quite sufficient for the purpose, and as a rule the patient was not kept under hypnosis longer than fifteen minutes. Anesthetics also have been used for the same purpose; chloroform was given, until light anesthesia was obtained. Persuasion, re-education and physiological re-education are of great value.

After the cure of the symptoms the patient should not be sent to the front, but should be given from three to six months' furlough for an after cure, the first part of the furlough to be

spent with his family, and the later part in one of the convalescent camps, where the soldiers are retrained.

From every point of view an early and adequate treatment is imperative. No patient should be discharged from the Army until cured, as it is cruel to send these men back to civil life, unless they find suitable employment.

I was kept in the service until I was very much improved, after which I was honorably discharged and allowed to go to America.

Dr. P. W. Tomlinson, Wilmington: I do not think that any of us know enough about the subject to discuss this paper, but I want to express my appreciation and gratitude to the Doctor for presenting it. I trust that none of us will have need to use the suggestions contained therein. I don't think we will, thanks to God.

Chronic Foot Strain

By Harold L. Springer, M. D., Wilmington.

It is perhaps fortunate that the title of this paper was not announced, since the subject of chronic foot strain, or flat-foot, as it is commonly called, sound rather uninteresting. The condition should be of interest, however, for several reasons:

First. It is a very common affection.

Second. In our recent experiences as examiners for the draft boards, we have had called to our attention a great number of these cases and there have been many errors in classifying the registrants.

Third, and most important, this subject is one with which the general practitioner seems to be absolutely unfamiliar.

While the condition is naturally of the greatest importance from the military standpoint, it is equally important to the general practitioner and surgeon in civil life, because so many people have this form of foot trouble. Patients present themselves to their family physician for relief of conditions due to foot strain and he fails to give them this relief because he fails to recognize the cause of their trouble, and necessarily can not apply the appropriate treatment. This is one of the reasons for the feelings on the part of the profession that flat-foot is

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such an unsatisfactory condition to treat. It is for these reasons that I have undertaken to present this subject for your consideration and I will discuss briefly the main points of practical interest.

Sub-acute or chronic foot strain, commonly known as flat-foot, fallen arches, etc., is an affection of the arch of the foot, due to a lowering of the longitudinal arch at the astragalo-scaphoid junction, and a brief review of the anatomy and physiology of the foot will be necessary for an accurate understanding of the condition in order to correctly diagnose and treat it.

The bones and soft structures of the foot form two arches, a longitudinal, which is involved chiefly in the condition under discussion, and a transverse. The longitudinal arch extends from the heel to the distal end of the first metatarsal bone, its highest point being the scaphoid bone, and while a distinct arch should be present there is no established rule regarding its normal height. This arch is seen from the inner side of the foot. The transverse arch is formed by the distal ends of the metatarsal bones and should present a convexity when viewed from the dorsum of the foot, its highest point being the second or third metatarsals. The arches are maintained by the key-stone arrangement of the bones of the foot and are supported by the ligaments, tendons and muscles. The middle of the foot in its relation to the longitudinal arch corresponds to a point at the articulation of the inner cuneiform and the first metatarsal (great toe). The excess in measurement of the posterior half over the anterior half of the foot indicates more or less accurately the extent to which the foot is flattened, since elongation occurs in the posterior portion and may reach three-fourths inch. The appearance of the normal foot should be considered with regard to the appearance of the foot itself, particularly the arches, and the relationship of the foot to the leg. A line drawn from the center of the patella to the crest of the tibia and downward should pass between the second and third toes.

From behind a similar perpendicular dropped from the center of the popliteal space should pass through the middle of the heel. In flat foot it may pass to either side, usually the outer side. As to the foot itself, the toes should be straight, lie flat, the anterior arch broad, all the joints freely movable without rigidity or spasticity and there should be no overriding of the toes, no callousities, bunions or other inflammatory conditions. The normal foot should be so balanced that in walking or standing the weight rests on the outer edge of the foot and heel and across the base of the toes.

A straight line running through the center of the great toe

and the center of the heel should be parallel to a similar line touching the inner edge of the great toe, the first metatarso-phalangeal articulation, and the inner edge of the heel. The bones of the feet are united by ligaments which are joined to the bone through the periosteum. This ligamentous tissue is inelastic and not sensitive but the periosteum is rich with sensitive nerves and when subjected to strains either long continued or excessive, becomes the seat of pain and eventually the seat of inflammation. If the element of infection is added, increasing disability not only results but a lesion is developed which is more or less permanent. When the muscles are acting normally the ligaments are protected from undue strain or tension, but if the muscles fall short in the performance of their functions, strain on the ligaments is induced and disability and deformity eventually result. Therefore chronic foot strain occurs as a result of lowering of the arch of the feet which may be due to a number of causes. The arch usually forms soon after birth but in some individuals it never forms. It may be formed but because of faulty musculature, improperly fitted shoes in the young, or rarely as a result of some trauma to the arch, it is never a strong one and easily breaks under increasing use, even though the demands upon it be no more than normal. Another cause is overloading the feet such as occurs in people who have rapidly taken on an increase in weight. The person may be called upon to assume duties involving the carrying of heavy loads as illustrated by the civilian who goes from a sedentary occupation and takes up the strenuous duties of a military camp.

His muscular development was sufficient for his needs in civil life but incapable of carrying the heavy loads demanded by military training. Abnormal feet posture is another cause but can, as a rule be cured by proper muscular training. There is also a large group of cases of foot strain resulting from the various inflammations such as rickets, tuberculosis, gout or rheumatism and etc. The group of disabilities resulting in foot strain, commonly known as flat feet, fallen arches, or pes planus regardless of the appearance of the arches themselves, may be divided as follows:

1. Flacid.
2. Rigid.
3. Spastic.

4. Osseus which is really a further degree of the rigid type. It is sometimes practical, however, to refer to flat foot as of first, second and third degree, and they differ as follows: In first degree flat foot we notice merely a lowering of the longitudinal arch and it is present in a surprisingly large number of persons, but as a rule is associated with no symptoms and

no functional disability. From a military standpoint I think it can be considered in the classification by draft boards as not disqualifying and the registrant be sent to camp. In the flat foot of the second degree, the longitudinal arch has completely disappeared and the entire planter surface of the foot is in contact with the ground when standing. There is some eversion of the foot and the perpendicular line dropped from the center of the popliteal space passes to the outside of the middle of the heel. Third degree flat foot is really an exaggerated form of second degree, and is associated with marked eversion of the feet with a marked deformity of ankle joint.

In many cases the internal malleolus will nearly touch the ground when the subject walks. There is also associated with these cases bunions, callouses, etc., all of which goes to make up a picture of extensive disability. Personally I am of the opinion that this classification or division is insufficient and unscientific and it is unquestionably very difficult to draw a line that will accurately differentiate the degrees. A more suitable and accurately descriptive classification is the one already mentioned, dividing chronic feet strain into flacid, rigid and spastic, but the terms should be used in reference to the foot as a whole and not to the arch specifically. Absence of longitudinal arch is not of itself important and when found in a foot of normal shape and flexibility, it is not disabling but when associated with other abnormalities such as rigid joints, bunions and so forth it should be remembered that these latter are the cause of the disability. For this reason, negroes which as a race have flat feet, in the majority of instances do not suffer with functional disturbances. With these particulars in view it might be worth while to note that flat foot of the first degree is not as a rule disabling and the registrant should be classified by draft boards as physically qualified for general military service. All other forms should be classified for limited service or completely disqualified, depending upon the amount of functional disability and regardless of appearances. Lesions such as claw feet, hammer toes, bunions, callouses, and so forth are results of foot strain of an advanced degree. Flat foot of the flacid, rigid and spastic types are always those of the second and third degrees.

A foot may be normal in appearance but functionally disabled, on the other hand may be or may appear structurally abnormal but capable of performing its normal and usual functions without suffering or disability. The characteristic symptoms of foot strain are pain and stiffness but particularly pain in the foot at the instep, beginning when the erect posture is assumed, depending definitely on use as to intensity and disappearing with rest. During rest the feet become stiff and

when first used the pain is excruciating and more severe than at any time. This great pain passes away after a little use and after the joints become somewhat limbered up and the amount remaining is dependent upon the amount of work the feet are called upon to do. In addition to this pain in the instep it is usually present in the legs, knees, thighs, lower abdomen or lower part of the back, often in all, and there is present a stiffness of the muscles of these parts also. It is this pain and stiffness in the back and pelvis that accounts for the frequent errors in diagnosis made. Examination shows points of tenderness, at the second metatarso-phalangeal joint, the tubercle of the scaphoid, below the int. malleolus, ant. tuberosity of the os calcis, and frequently over the crest of the tibia and the tibialis anticus muscle. There are callousities over the anterior arch on the plantar surface of the feet which are very tender and often disabling of themselves. Loss of dorsal flexion of the great toe, in version or eversion of the feet on walking or standing, prominent scaphoid, permanent dorsal flexion of the small toes (claw toe, prominent of plantar surface of the anterior arch all of which are the result of flattening of the transverse arch) finally complete the picture. The flacid type differs from the rigid type in that the latter on examination reveals the presence of a rigid foot resulting from some arthritic involvement, that may be active from the result of some previous infection such as rheumatism, tuberculosis, old sprain, fracture, etc. This latter is common. There is usually atrophy of the muscles of the foot and leg and if the condition is confined to one foot the diagnosis is more easy. The symptoms and signs already discussed are present in this type as well as in the flacid type in addition to those that would naturally follow arthritis and its effects. The spastic type is not so frequently observed as the other two and is associated with spasticity of the peroneal group of muscles causing a limitation of motion noticeable when the attempt is made to supinate the foot. There is tenderness over the tip of the external malleolus and just below the peroneal tendons. The other symptoms common to foot strain are present also but the spasticity is the diagnostic point. The general body posture as well as the foot posture should be noted, also the character of the gait as to elasticity, as well as the presence or absence of exostoses, individual joint stiffness, and any other abnormalities that might be present and be a cause of the condition. There are a number of other conditions that may be spoken of as results of chronic foot strain or as complications that are frequently treated as a definite condition, when they are really dependent upon the foot strain as a cause and cannot be successfully relieved unless the underlying causative condition is removed.

They are hallus, varus and valgus bunions, metatarsalgia, callosities, hammer toe, claw feet, deformities of the little toe and even periostitis and osseous flat foot in which the foot is permanently fixed in one position.

TREATMENT

The fundamental principles of treatment depend upon the recognition of the fact that the function of the foot is that of an organ of locomotion and not merely a support on which to stand, and while both of these facts must be taken into consideration in the treatment of chronic foot strain, it is with the former fact that we are most concerned, therefore it is evident that a correct diagnosis of this mechanical disturbance of function as well as the proper understanding of any disease process that may have resulted, must be carefully considered if we hope to bring about a satisfactory correction of the trouble and necessarily bring relief from pain and suffering. The treatment naturally resolves itself into prophylactic, which can be dismissed in a few words by advising the use of proper muscular exercises that will strengthen the arch; and for convenience of description into mechanical and surgical. The surgical treatment of flat foot, that is operative measures is very unsatisfactory and while many ingenious operations have been devised none of them has the approval of surgeons, perhaps in the future some one may invent an operation that will restore cases of foot strain, flat foot to a normal condition. The discussion of the mechanical treatment for chronic foot strain opens the question of supports by plates either of steel or some other rigid material. It was formerly customary always to prescribe such treatment for flat foot, but some orthopaedic surgeons believe that they should not be used because they destroy the muscular control of the foot, thus weakening it, render it susceptible to sprains and other injuries. It is my opinion, however, that steel plates should often be used, but in selected cases. This use should not be routine for every case of flat foot that appears for treatment since there are cases in which their use not only fails to give the patient relief but may do him actual harm. When plates are necessary they should be of steel, heavy enough to support the patient's weight and should be fitted accurately to the individual. It is never possible, nor permissible for a patient to purchase his supports in shoe stores since failure will result because these plates are not heavy enough to carry the patient's weight in the majority of instances. They not only have to be made to fit the individual but they have to be inspected and changed frequently in order to give the necessary support, correct the deformity, and consequently restore the foot as near as possible to its normal

function. They should be fitted carefully to the shoe particularly to the heel. The heel of the shoe should be broad and not too low, since a moderately high heel is necessary for comfort. The shoe should be broad at the toe and should be of such a good fit as not to interfere with any possible complicating condition that might be present. This mechanical support should be maintained until such time as the use of exercises and other necessary treatment has enabled the patient to properly maintain the body weight without the use of these supports. In addition to this mechanical support the foot posture should be corrected and the muscles strengthened by proper foot and toe exercises and the patient should be advised that a cure can only result from long continued and patiently persistent attention to the muscular exercises. In foot strain of the rigid type the treatment differs from the above somewhat fundamentally, and consists in converting the rigid type to the flaccid type and then it is in accord with the principles already laid down. Careful attempts should be made to gradually break up the adhesions in the joints, but no violent manipulation should be resorted to except under general anaesthesia. Restoration of complete mobility should be considered indispensable.

After forcible manipulation, the foot should be dressed in plaster in an over-corrected position with the foot at right angle to the leg, and his dressing should be worn from four to six weeks, after which the treatment should be continued as described for the flaccid type. Active exercises should not be used until rigidity has entirely disappeared. As to the treatment of the spastic type it is evident that successful result also demands its conversion into the flaccid type. This, however, can be accomplished except in the mildest degrees, only by tenotomy of the peronei or even excision of a portion of the peroneal muscles. When spasticity and rigidity have been disposed of and the foot has assumed that flaccid type it is treated accordingly. Involvement of tendo-achilles requires either the relieving the strain on the tendon by raising the heel of the shoe one-half to one inch or the proper disposition of pads of felt strapped to the leg. The formation of callosities over the metatarsal heads on the sole of the foot which are often associated with claw feet and contractures of the toes usually are relieved by mechanical support of the depressed arch. Sometimes a cleat of leather one-fourth inch thick and one inch wide fastened to the sole of the shoe just back of metatarsal heads will give relief. Metatarsalgia is generally attributed to flattening of the transverse arch of the foot causing the metatarsal bones to fall into abnormal relations with each other and when pressed by the shoe, symptoms of pain, sharp or burning in

character and of paroxysmal occurrence located in the fourth metatarso-phalangeal joint is a very troublesome complication. Its treatment is proper support of the depressed arch and cleat of leather back of the metatarsal heads. Other complications such as hallux-valgus and rigidis, hammer toe, deformity of the little toe and claw feet as well as any active arthritic condition, such as tuberculosis, etc., should be given their appropriate treatment.



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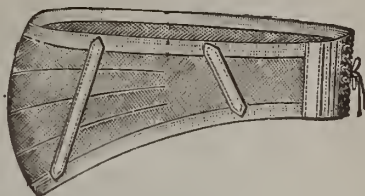
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